The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 720.—Vol. XIX.] LONDON, SATURDAY, JUNE 9, 1849. [Price 6d.

EXTENSIVE IRON-WORKS FOR SALE.
UPSET PRICE FURTHER REDUCED TO £45,000.

TO BE SOLD, BY PUBLIC ROUP, within the Royal Exchange Sale Rooms, GLASGOW, upon Wednesday, the 13th day of June next at One o'clock afternoon (if not previously disposed of by private bargain), 1

THE BLAIR IRON-WORKS,

belonging to the Ayrshire Iron Company, situated in the parish of Dairy and county of Ayr, including FIVE BLAST-FURNACES, with TWO BLOWING-ENGINES, fit for these and additional furnaces, manager and workmen's houses and stove, together with a large extent of MINERAL FIELDS, held under most favourable leases, producing Ironstone of the best qualities, Coal, Limestone, and Fire-clay, with Pits, Steam-Engines, and necessary appurtenances for carrying on the works on an extensive scale; also the adjoining

MALLEABLE IRON-WORKS,

So far as erected—all having a connection with the Glasgow and Ayr Railway, and as more fully described in former advertisements.

There is a large stock of ironstone on the ground, which may be got at a valuation.

For particulars apply to Mr. Biggart, at the works; W. D. Starling, Esq., 13, Change-alley, Birchin-lane, London; Mr. Watson, 32, or Mr. Brown, 35, St. Vincent-street, Glasgow.—Glasgow, May 10, 1849.

TO ENGINEMAKERS, BOILERMAKERS, IRONFOUNDERS, AND IRONMASTERS IN GENERAL.

MR. G. O. BROWN begs to announce that he has received instructions from the proprietors of MILTON IRON-WORKS, near BARNSLEY, to submit to PUBLIC COMPETITION, BY AUCTION, on Monday, the 25th day of June next, and following days (Saturdays and Sundays excepted), until the whole are sold, at the WORKS, the WHOLE OF THEIR 2

EXTENSIVE STOCK

Of enginemakers', boilermakers', ironfounders', fitters', and turners' tools, 30 hearths of smiths' tools complete, steam-engines, slotting machine, drilling machine, 2 railway wheel lathes, boiler plate bending machine, cupolas, fans, and shafting, screwing and nut machine, a large pipe proving machine, and various other machinery suitable for the iron trade, 10 double and single purchase crabs, various blocks and ropes, metal and other cranes, 2 road-weighing machines, 2 filling machines, and one smaller weighing machine, a large strong fly punch, a set of large three legs, crab and breaking ball, 600 tons of forge pig and refined plate metal, 100 tons of bar and rod-iron (various sizes), a quantity of English oak and other timber, the whole of the office furniture, fittings, and fixtures, which are very good and complete, together with

A FIRE-BRICK FURNACE LINING,

complete; a quantity of seasoned hearthstones and damstones, and a great variety of other articles, which cannot be enumerated here, but which will be particularised in catalogues before the sale.

Mr. G. O. BROWN has also received instructions to OFFER FOR SALE, BY PUBLIC AUCTION, at the same time and place as above (unless a treaty be concluded previously by private contract), all the STEAM-ENGINES, CUPOLAS, MACHINERY, pipe-proving engines, cranes, wood and iron models and patterns, metal casting boxes, core barrels, drawing and working plans, lately used by Messrs. Graham, in carrying on their extensive Foundry and Engine Manufactory at Milton Iron-Works.

As the casting and engine department will not in future be carried on at the Milton Iron-Works, a LEASE will be GRANTED to any eligible party applying for a plot of ground near the Elsecar Colliery, and adjacent to the Dearne and Dove Canal and South Yorkshire Railway.

Application to be made to treat by private contract for the last-mentioned articles to Mr. Newman, of Darley Hall, near Barnsley; or to Mr. Woodhouse, of Overseal, near Ashby-de-la-Zouch.

HIGHLY VALUABLE AND IMPORTANT FREEHOLD ESTATES,
In the parishes of CALSTOCK and ST. DOMINICK, CORNWALL; 1 mile from Callington, 6 from Tavistock, and 14 from the Tamar River, from whence there is a daily steam communication with Saltash, Devonport, and Plymouth.

TO BE SOLD, BY AUCTION, at Golding's Hotel, in the borough of CALLINGTON, on Thursday, the 28th day of June next, at Three o'clock in the afternoon— 3

Lot. I.—The most desirable farm of HARROWBARROW, in the said parish of Calstock, as now occupied by Mr. Joseph Rickard; containing about 200 acres of arable, meadow, pasture, and orchard lands, with about 35 acres of timber and coppice woods and Plantations, and the exclusive right to the soil and pasture of about 160 acres of enclosed common, adjoining the farm; together with four houses on the common, held for a long term of years, at a yearly rent of 10s. per acre; another double house, occupied by —— Westcott, with 7 acres of common, at the yearly rent of 7s. 6d. per acre; together with other houses on the common, occupied by Deeble and Cotton; and a dwelling-house and garden at Wheal Brothers, occupied by Samuel Rice; and many other buildings, lately used for mining purposes.

Lot II.—The tenement of HARROWBARROW (adjoining Lot I.), as now occupied by Mr. James Spear, containing about 85 acres of very excellent land; and also two dwelling-houses and garden, at East Harrowbarrow, occupied by J. Hancock and W. Forrest.

Lot III.—All those WATER GRIST MILLS, with the meadow lands, gardens and orchards, and a portion of Harrowbarrow Wood, from whence it is divided by the highway (except a small part at the west end, in the parish of Calstock), and five fields of excellent pasture land, in the parish of St. Dominick, containing together about 14 acres, as now occupied by Mr. William Babb, miller.

Lot IV.—All that DWELLING-HOUSE, GARDEN, and PIGS' HOUSES, on Harrowbarrow Waste, now occupied by John Werth; with the extensive carpenters' and smith's shops; and the garden at the west end of Bunking's Bottom Coppice, excepted out of Lot III.

Lot V.—All that TENEMENT, consisting of a dwelling-house, orchard, and garden, in East Harrowbarrow, as occupied by Samuel Fitze.

Lot VI.—All that TENEMENT, at East Harrowbarrow, as occupied by Wm. Cocking and Samuel Truscott, consisting of two dwelling-houses, two gardens, and a plot of land.

Lot VII.—All that DWELLING-HOUSE, GARDEN, BLACKSMITHS, SHOP, and PIGS' HOUSES, at East Harrowbarrow, now occupied by Hercules Pearce.

The timber, coppice, and plantations on the several lots to be valued, as between the purchasers and sellers, in the usual way. There are comfortable dwelling-houses, and suitable outbuildings and conveniences on the farms and mills, and the latter are amply supplied with water and business.

The LAND is known to abound with SILVER-LEAD and COPPER ORES; and it may be proper to call the attention of mine speculators to this important sale, by mentioning that Malachy's Wheal Brothers Silver Mine, and the Great St. Vincent, and East Cornwall setts, are on this property—many of the necessary mine buildings (Lot III.) remaining and in good repair. Though these mines have not very recently been worked, it is manifest that woful mismanagement and trickery compelled the parties interested to suspend the proceedings—nevertheless, there the ores are.

It is particularly desired that application for viewing the above property be made to Mr. Joseph Rickard, at Harrowbarrow Farm, who has a map of the property, and being well acquainted with the same, will clearly particularise the contents of each lot, and give information as to the tenure—the greater part of the property being fee-simple and the remainder enfranchised Duchy; and further particulars may be obtained of Messrs. Herring, of Trecorne, Quethiock; or at the offices, in Liskeard, of Mr. Glubb, solicitor.

Dated May 29, 1849.

THE BRISTOL IRON-WORKS,
Situate in the parish of ST. PHILIP and JACOB, in the city of Bristol.

MR. EDWIN NAISH will SELL, by AUCTION, on the premises, on Monday, the 23d of July, 1849, at Twelve o'clock precisely, agreeably to plans and conditions, all those unrivalled

FREEHOLD ENGINEERING, FOUNDING, FORGE, AND BOILERMAKERS' PREMISES—KNOWN AS 4

THE BRISTOL IRON-WORKS,

Erected about eight years since, in the most substantial manner, covering an area of about six acres, with frontage to the high road about 1350 feet, and another frontage of about 1150 feet to the water, by which they are approachable by the largest Severn trows.

Also, on Tuesday, the 24th July, and following days, at Eleven o'clock A.M., by catalogues,

ALL THE VALUABLE MACHINERY AND STOCK,

Forming a larger assortment of modern engineering tools, by the first makers, than any other establishment—consisting in part of the following:—

FOUR CONDENSING STEAM-ENGINES, and FIVE HIGH-PRESSURE STEAM-ENGINES, varying in power from 8 horses to 40 horses each.

Five light, three tilt, and two vertical FORGE HAMMERS, varying in weight from 10 cwts. to 10 tons.

EIGHTY-TWO SMITHS', FOUNDRY, PIER, and other CRANES, varying in their lifting power from 10 cwts. to 30 tons.

FORTY-FOUR ENGINE-TURNING LATHES, with beds, varying in length from 30 ft. to 4 feet 6 inches, with a capability of taking from 15 feet on the largest, down to the smallest object on the smallest respectively on their face chucks.

TWO patent RIVETTING MACHINES.

NINE PUNCHING and SHEARING MACHINES, of every variety of power.

TWENTY-FOUR DRILLING MACHINES, fixed or portable, to drill ¾-inch up to 14 inches.

FIFTEEN PLANING MACHINES, with a capability to plane from 12 feet in width and 20 feet in length on the largest, down to the smallest object on the smallest in size.

THREE BORING MILLS, equal to bore from 12 feet in diameter downwards.

SEVEN SLOTTING or GROOVING MACHINES, varying between the largest and smallest known sizes.

Three single and one double SCREWING MACHINES; four nut-shaping MACHINES—besides every variety of TOOL, and upwards of 2000 feet of SHAFTING, and a due proportion of cones, drums, and pulleys.

Orders to view the works, with plans, catalogues, and conditions of sale, may be had on and after the 1st of July next, on application at the offices of the auctioneer, 7, North-street, Bristol; or of Mr. T. R. Hutton, official assignee, Bristol; Messrs. Osborne, Ward, and Co., solicitors, Bristol; Messrs. Makinain and Sanders, solicitors, Elm-court, Temple, London; Messrs. Waltjen and Co., Bremen, Germany; and of J. K. Haberfield, solicitor to the assignees, Bristol.

Stannaries of Cornwall—In the Vice-Warden's Court.

ROSCORLA v. HOBSON,

IN RE BALNOON CONSOLS MINE.

NOTICE IS HEREBY GIVEN, that, pursuant to an Order or Decree, made in this cause, and bearing date the 11th day of May inst., a PUBLIC AUCTION will be HELD at CROTCH'S HOTEL, HAYLE, on Saturday, the 16th day of June next, at Three o'clock in the afternoon, for SELLING, in such lots as shall be then and there determined on, EIGHT (120ths) PARTS, or SHARES, of and in the said MINE, and the LIKE PARTS, or SHARES, of and in the ORES, HALVANS, MACHINERY, and MATERIALS, and other EFFECTS upon and belonging to the said mine. 5

For further information application may be made to the agents on the mine, or to

Dated Registrar's Office, Truro, May 30, 1849. Mr. STOKES, Solicitor, Truro.

Stannaries of Cornwall—In the Vice-Warden's Court.

FOX AND OTHERS v. ELLERY. 6

NOTICE IS HEREBY GIVEN, that, pursuant to an Order or Decree, made by His Honour the Vice-Warden, bearing date the 8th day of May last, a PUBLIC AUCTION will be HELD at TREWOLLACK MINE, in the parish of ST. COLUMB MINOR, within the said Stannaries, on Tuesday, the 19th day of June inst., at Twelve o'clock at noon, for SELLING a 22-inch ROTATORY STEAM-ENGINE, with BOILER, about 10 tons.

For viewing the same, application may be made to Mr. Glasson, at the mine; and for further particulars (if by letter pre-paid) to Mr. ROBERTS, Solicitor, Truro.

Dated Registrar's Office, Truro, June 6, 1849.

Contract for Copper.

DEPARTMENT OF THE STOREKEEPER GENERAL OF THE NAVY, Somerset-place, June 7, 1849.

THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, do hereby give Notice, that, on Tuesday, the 19th inst., at One o'clock, they will be ready to TREAT with such PERSONS as may be willing to CONTRACT for SUPPLYING Her Majesty's Dockyards at CHATHAM and PORTSMOUTH with 7

THE FOLLOWING QUANTITIES OF

ENGLISH TOUGH CAKE COPPER:

150 Tons to be delivered at CHATHAM, and 50 Tons to be delivered at PORTSMOUTH,

Within Six Weeks of the Date of the Contract.

A form of the tender may be seen at the said office.—No tender will be received after One o'clock, on the day of treaty, nor any noticed, unless the party attends, or an agent for him, duly authorised in writing.

Every tender must be addressed to the Secretary of the Admiralty, and bear in the left-hand corner the words, "Tender for Copper," and must also be delivered at Somerset-place, accompanied by a letter signed by two responsible persons engaging to become bound with the person tendering in the sum of £4000, for the due performance of the contract.

VALUABLE AND EXTENSIVE MINES OF COAL AND IRONSTONE.

TO BE LET, ON LEASE, on most advantageous terms, the COAL and IRONSTONE under a very large tract of land, in the parish of RUABON in the county of DENBIGH, adjoining the Shrewsbury and Chester Railway.

The proprietors of the ESTATES on which the Ponkey and Aberderfyn Iron-Works were formerly carried on, have made arrangements TO LET BOTH PROPERTIES TOGETHER, which will give the lessee of them facilities to carry on a lucrative business—very rarely to be met with.

The COALS and IRONSTONE on these ESTATES may be raised at very much less than an average cost, and the quantity proved in them (besides what are under a very large portion of one of them, in which there is no doubt they will be found) is estimated will supply iron-works with materials to make 400 tons of pig-iron weekly for upwards of 30 years, as well as 50,000 tons of the much and justly-celebrated Yard and Wall and Bench Coals per annum for sale, for the same period.

Printed particulars of the property, and lithographed plans of the estates, showing the minerals under them, with calculations as to the expense of making iron from them, as compared with that of manufacturing it in Staffordshire, may be had upon application at the office of the *Mining Journal*, 26, Fleet-street; and at J. Boydell's, 54, Threadneedle-street, London; and at Messrs. Longeville and Williams, solicitors, Oswestry.

Oswestry, June 6, 1849.

TO BE SOLD, BY PRIVATE TREATY, A VALUABLE TIN and SILVER-LEAD MINE, situate in the parish of CALSTOCK, in the county Cornwall.—The sett is extensive, and contains several valuable TIN and SILVER-LEAD LODES, in a beautiful clay-slate strata, which holds out great promise of becoming a rich and lasting mine. The different agents who have inspected the mine speak of them in the most encouraging terms, and strongly recommend the working of them. There are also the requisite mine buildings—viz., counting-house, blacksmiths' and carpenters' shops, material-house, assay office, and the materials on the mine. 8

The property is held under a lease for 21 years, 20 of which are unexpired, at 1-16th dues.

Detailed particulars may be obtained, either by personal application or by letter (pre-paid), to the proprietor, Mr. Wm. Bice, Callington; or at the office of the *Mining Journal*, 26, Fleet-street, London.

DUISBURG IRON-WORKS AND MINES, 10

IN WESTPHALIA, CLOSE TO THE RHINE.

Managed in England according to the principles of the "Cost-book System," and in Prussia as a *Société in Commandite*, under laws limiting the liability of the shareholders to their personal subscription.

Company's Offices, 28, Moorgate-street, City.

GROWA SLATE COMPANY,

TREVALGA, CORNWALL.

6000 parts, or shares, of £5 per part, or share (all paid), whereof 2300 parts, or shares, are offered to the public. 11

NOW IN WORK ON THE "COST-BOOK" PRINCIPLE.

The QUARRY is situated on the CLIFFS, within one mile of the port of Boscastel—vessels load at the quarry during three-fourths of the year.

The SLATE forms a remarkable exception to the general constitution of this mineral; and whilst its applicability to the several purposes of roofing, flooring, and the usual adaptations of the grey, blue, and other slates, a new series of utilities has been developed to the directors (by a gentleman who has, in consequence, been appointed superintending engineer to the company), which will extend its application in a variety of preparation to an extensive and completely novel character of uses.

A PATENT is in course of completion, for the purpose of securing to the shareholders in this undertaking the exclusive benefits to be derived from one of the most attractive discoveries of the present age.

Prospectuses, and all other information, may be obtained at the offices of the company 57, Threadneedle-street, where specimens of the slate may be seen; or to the solicitor John Chapple, Esq., 70A, Aldermanbury. Prospectuses can also be had at the office of the *Mining Journal*, 26, Fleet-street.

London, May 16, 1849.

JAMES BOYDELL, LAND, MINE, AND MACHINERY VALUER, AND AGENT,

No. 54, THREADNEEDLE-STREET, LONDON, 12

HAS TO DISPOSE OF

A PATENT RIGHT for BUILDING VESSELS with IRON, on a principle which combines increased strength with greater economy of manufacture.

Also, ONE for the CONSTRUCTION of IRON ROOFS, on a like principle. A specimen of this may be seen as a roof covering one of the retort-houses of the Birmingham and Staffordshire Gas Company, by permission of Mr. Cliff, the engineer, at the works.

Also, ONE for IRON JOISTS and RAFTERS, and for a plan of joining large plates and sheets of iron.

Also, ONE for the AMALGAMATION of STEEL and IRON—in the progress of the manufacture of the latter, by which a great saving may be effected in the cost of making edged tools.

The LEASE of a very celebrated FOUNDRY and ENGINEERING ESTABLISHMENT, on the River Dee, complete, with fixtures, machinery and tools, in working order, and ready for any parties to embark at once on building first-class iron steam-vessels, and marine and locomotive engines.

The above will be found worthy the attention of any parties desiring to invest money in a profitable business, as they will be disposed of upon terms which will ensure an unusual return to the purchasers of them.

Also, SOME COAL and IRONSTONE MINES, FREESTONE QUARRY, and a large FREEHOLD ESTATE.

Also, STEAM-ENGINES and MACHINERY, of all descriptions, and which he is enabled to offer at very moderate prices.

Also, SHARES in a well-known valuable SLATE QUARRY, in CARNARVONSHIRE.

Also, SHARES in, or the whole of, a GAS-WORK, which supplies exclusively a populous town in Shropshire, and which can be greatly extended.

Particulars of the above may be had, upon application, at 54, Threadneedle-street.

TO ENGINEERS, BUILDERS, AND ARCHITECTS.

JAMES BOYDELL, 54, THREADNEEDLE-STREET, having been a very large manufacturer of machinery and irregular shaped iron, and having accomplished the rolling of some descriptions of the latter, thought by many to have been impracticable, will be happy to ASSIST any ENGINEERS, SHIPBUILDERS, and ARCHITECTS, in the planning of the details of what IRONWORK they may have occasion for, or bringing to perfection any invention in machinery, as well as procuring such materials for the purpose as they may require.

LOANS ON DEBENTURES.—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS OF LOANS, in sums not less than £500.—Applications to be made or addressed to this office.

125, George-street, Edinburgh, May 30, 1849. D. RANKINE, Treasurer. 3

TO BE SOLD (Cheap), a 40-horse HIGH-PRESSURE HORIZONTAL STEAM-ENGINE, quite new; cylinder 24 inches diameter, stroke 4 feet, mounted upon a strong metal box frame.—Apply to Mr. Matthew Smith, Sylvester Works, Sheffield, where the engine may be seen. 14

TO TIN SMELTERS AND TIN-PLATE MANUFACTURERS.—A COMMISSION AGENT, of some years standing in the City, and who is perfectly conversant with the trade, is OPEN for an AGENCY, for the SALE of TIN and TIN-PLATES.—Address "R. A.," Messrs. Knight and Foster, stationers, Eastcheap.

STEAM-ENGINE FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, an 85-inch cylinder STEAM-ENGINE, 10-feet stroke, equal beam.—Application to be made to Messrs. Hocking and Loam, engineers, Redruth. 16

FOR SALE,—SHARES in that promising TIN MINE, called RIX HILL (East Crowndale), now making considerable monthly returns. Apply to Mr. William Birdsey, 9, St. Michael's-alley, Cornhill. 17

VENTILATION OF COAL MINES.

BIRAM'S PATENT ANEMOMETER—price £5 5s.—This INSTRUMENT is now in USE in most of the MINING DISTRICTS, and particulars will be given on application to the patentee, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, mathematical instrument maker, Derby. 18

MINING OFFICES, THREE KING'S COURT, LOMBARD STREET, LONDON.—Messrs. R. TREDINNICK & CO. beg to draw the attention of capitalists to the DEPRESSED MARKET VALUE of SHARES in ENGLISH and FOREIGN MINES, many of which pay dividends of from 20 to 30 per cent. per annum, whilst those on the eve of so doing are selling at corresponding low prices.—Messrs. T. & Co. continue to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously, upon personal application.—MONEY ADVANCED upon the above securities. 19

MINING PROPERTY.—Mr. JAMES HERRON, MINE AGENT, 33, CLEMENTS-LANE, LOMBARD-STREET, has received instructions to DISPOSE of SHARES in FIRST CLASS MINES, paying regular dividends, and yielding to the purchaser from 17½ to 25 per cent. upon his outlay. He is also in a position to transact business in the following—viz.; Kirkcudbrightshire, Treleigh, Bedford, Alten, East Tamar, H. Imbush, Trethellan, Treviskey, East Pool, Trelawny, Mary Ann, South Tolgus, West Seton, North Pool, West Caradon, West Buller, Stray Park, South Frances, East Wheal Rose, Great Devon Consols, Imperial Brazilian, St. John del Rey, and United Mexican Mines. 20

MESSRS. JOHN T. TEAGUE AND CO., MINE SHAREBROKERS, No. 4, KING-STREET, TRURO, CORNWALL,
Have BUSINESS to do in the following MINES:—West Caradon, West Buller, Tincroft, Stray Park, East Pool, Carn Brea, West Seton, South Frances, Camborne Consols, Treviskey and Barrier, Wheal Calstock, East Wheal Rose, Wheal Ellen (Redruth), Kingsett and Bedford, Mineral Court, St. Aubyn and Grylls, Bedford United, &c. 21

MR. GEORGE BATE, Jun., CIVIL ENGINEER AND SURVEYOR, *WOLVERHAMPTON.*
Offices in Queen-street, corner of Piper's-row. 22
N.B.—UNDERGROUND MINING SURVEYS accurately executed.

MR. R. ARMSTRONG (from Manchester), CONSULTING STEAM ENGINEER, STEAM BOILER, FURNACE, AND CHIMNEY ARCHITECT, 23
INVENTOR AND MANUFACTURER OF SELF-ACTING BOILER CLEANSING, FIRE FEEDING, SMOKE CONSUMING, and VENTILATING MACHINERY.
Author of *An Essay on the Boilers of Steam-Engines*, and Agent for various Patent Inventions and Improvements connected with Steam.
Economy of Fuel and Safety from Explosions assured by periodical inspections for a small annual charge.
*** Office—No. 16, Great Winchester-street, Old Broad-street, London.

BLAENAVON IRON AND COAL COMPANY.—The INTEREST on the DEBENTURES in this company, payable half-yearly, may be RECEIVED on application at these offices, on and after the 5th July, between the hours of Eleven and Three o'clock. By order of the board, 24
Offices, 4, Pancras-lane, June 8, 1849. JAMES BOOTH, Secretary.

PEMBROKESHIRE IRON AND COAL COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of this company will be HELD at the office of the company, Gresham Rooms, Basinghall-street, London, on Wednesday, the 27th day of June inst., at half-past One o'clock precisely, for the purpose of altering the Forty-second Clause of the Deed of Settlement as to the number of directors, and to proceed under the Forty-first clause for the removal of certain directors, or of gentlemen claiming to be directors.
By order, JOHN F. NEALE, Secretary. 25
Gresham Rooms, 18, Basinghall-street, June 6, 1849.

RHYMNEY IRON COMPANY.—The HALF-YEARLY GENERAL MEETING of the proprietors of this company will be HELD at the company's offices, 7, Laurence Pountney-hill, on Wednesday, the 20th inst., at One o'clock precisely, By order of the board, 26
7, Laurence Pountney-hill, June 1, 1849. T. E. SCUDAMORE, Secretary.

ST. JOHN DEL REY MINING COMPANY.—Notice is hereby given, that the FOURTEENTH HALF-YEARLY DIVIDEND, being 25s. per share on the shares of this company, will be PAYABLE at this office on Monday next, the 11th inst., and every succeeding day, between the hours of Ten and Four.
Forms for claiming the dividend may be obtained at the company's office, and must be left three clear days for examination previous to payment. 27
8, Tokenhouse-yard, June 8, 1849. W. ROUTH, Secretary.

IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.—At a General Meeting, held at the London Tavern, May 28, 1849, for the election of six additional pensioners, and for other business,
T. B. SIMPSON, Esq. (Vice-President, Treasurer, and Trustee), in the chair. 28
It was resolved unanimously,—That Henry Clark, Esq., of 159, Shoreditch, be elected a Vice-President of this Society.
At the hour of One o'clock, the Eighth Rule of the Society, regulating the Elections, having been read, it was—
Resolved unanimously,—That this meeting proceed to the election of six additional annuitants, from the list of 14 candidates, declared eligible by the committee—namely, four of the men and two of the women, polling the greatest number of votes.
The chairman having nominated Messrs. Constable, John Dale, and William Bowsee, as scrutineers, with power to nominate their assistants and deputies, the meeting proceeded to the ballot accordingly, when the following votes were recorded—for

George Allan	Votes 2481	William Whitely	Votes 61
George Paul	2169	James B. Bowley	2
John Line	1020	Sarah Littlewood	788
Robert Frost	943	Ann Robinson	766
John Fletcher	791	Sarah Brown	106
William Dods	556	Sarah Ann Smith	56
John Large	491	Sarah French	42

Whereupon the chairman declared George Allan, George Paul, John Line, Robert Frost, Sarah Littlewood, and Ann Robinson, to be elected to pensions of 20 guineas each.
Resolved unanimously,—That the thanks of this meeting be presented to the several gentlemen who have so kindly and ably acted as scrutineers this day.
Resolved unanimously,—That this meeting having been informed of the resignation of the much respected honorary collector of the society, Mr. Ridge, in consequence of the growing duties of the office being no longer compatible with his business engagements, beg to offer him their best and most cordial thanks for the valuable services rendered by him to the society for nearly three years, by which such a considerable saving in the expenses of management has been effected, as to entitle him to a foremost rank among the benefactors of this institution.
Resolved unanimously,—That the thanks of this meeting be presented to the honorary secretary, Mr. Thomas Hawkins, for his untiring zeal and valuable labours on this and all occasions.
Resolved unanimously,—That the proceedings of this meeting be advertised, under the direction of the committee, with a notice of the seventh election of pensioners, in Nov. next.
Resolved unanimously,—That the best thanks of this meeting are due to T. B. Simpson, Esq., treasurer, vice-president, and trustee; and H. L. Taylor, Esq., vice-president and trustee, for their kindness and courtesy in presiding over the proceedings of this meeting.
T. HAWKINS, Hon. Secretary.

IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.—NOTICE.—The SEVENTH ELECTION of PENSIONERS will take place in NOVEMBER next. The candidates must be deserving and necessitous persons, occupying, or having occupied, the station of master, traveller, clerk, warehouseman, foreman, or apprentice, in any branch of the iron, hardware, or metal trades, in any part of Great Britain; or the widows of such persons. Printed forms of application may be had of the undersigned, to whom they are to be returned, filled up with the required particulars, on or before the 6th of August next, after which day no application relating to this election can be received.
Further information may be obtained on application to any member of the committee in town or country, or to THOMAS HAWKINS, Hon. Secretary. 29
67, Upper Thames-street, London.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY	Royal Botanic—Inner Circle, Regent's Park	3½ P.M.
MONDAY	Geographical—3, Waterloo-place	8½ P.M.
TUESDAY	Medical and Chirurgical—53, Berners-street	8½ P.M.
	Civil Engineers—25, Great George-street	8 P.M.
	Zoological—11, Hanover-square	3 P.M.
	Syro-Egyptian—71, Mortimer-street, Cavendish-square	7½ P.M.
WEDNESDAY	Geological—Somerset-house	8½ P.M.
	Literary Fund—73, Great Russell-street	3 P.M.
THURSDAY	Royal—Somerset-house	8½ P.M.
	Antiquaries—Somerset-house	2 P.M.
	Royal Society of Literature—St. Martin's-place	3 P.M.
	Numismatic—41, Tavistock-street, Covent-garden	7 P.M.
SATURDAY	Asiatic—5, New Burlington-street	2 P.M.

ROYAL COLLEGE OF CHEMISTRY.

The annual general meeting of subscribers and members was held on Monday last, at the College in Oxford-street.—Sir CHARLES LEMON, Bart., in the chair.

The report of the council stated:—

"That the debt which had so heavily weighed upon the further progress of the institution was now at an end, and that the income of the college, derived from the successful operations of the school, together with voluntary contributions, would prevent the recurrance of those difficulties which seemed to be inseparable from such a great design. The council had disposed of their house in Hanover-square upon advantageous terms, but had reserved sufficient ground behind the laboratories for the erection of a lecture theatre, as originally designed by their architect, the foundations of which were laid at the time the structure in Oxford-street was built. A fund had been opened for its completion, and the first contribution to it was made by Dr. Faraday, a name especially dear to all the lovers of chemical science. The estimated cost of the theatre, with all appliances for illustrating lectures, was 1800*l.*; and the council anticipated that they would be enabled soon to commence the works, and thus realise the original design of the founders of the college; for not only would the operations of the school be extended, but an opportunity would be afforded of having those scientific *soirées* which had been so gratifying to the members and their friends. The school was increasing in prosperity, and its reputation was eminently due to the zeal and master mind of Professor Hofman, to the labours and intelligence of the assistants, and to the industry and talent of the pupils. The reports of the researches conducted in the laboratories, lately issued, was a sufficient proof of those facts, and the council believed that such a body of investigation on difficult and original subjects was without a parallel in any school of such recent establishment in any part of Europe. The 'Remarks upon Experimental Sciences,' as well as the 'Introduction to Researches,' by Dr. Hofmann, would be read with pleasure and deep interest by all persons. Nothing could more plainly show than the former of those papers the value of chemistry to the commerce of this country, or how a practical people, like the inhabitants of Great Britain, might apply the discoveries of pure science to reproductive and producing operations. To increase the diffusion of those benefits by furnishing able corps of analysts and experimental chemists had been the great aim of the college, and the council confidently anticipated that its successful working was now placed beyond a doubt." The report concluded by congratulating the members upon the increase of the income of the institution for the past year. The receipts amounted to 3191*l.* 12*s.* 4*d.*; the expenditure to 2791*l.* 5*s.* 4*d.*—leaving a balance of 400*l.* 7*s.*

The report of Professor Hofmann, which also gave a very satisfactory account of the proceedings of the college, stated that the number of students in attendance for the last two sessions remained about equal to that of former sessions, and that there was a considerable increase in the time devoted by pupils to practical studies in the laboratories; between 20 to 30 were in regular daily attendance, and perfect propriety of conduct had invariably prevailed among them. The report was received and adopted, and the various officers elected for the ensuing year. Votes of thanks to Prince Albert, for his patronage of the institution; to Mr. B. B. Cabbell, the treasurer; to the chairman, and to the other officers of the college were then passed, and the meeting broke up.

INSTITUTION OF CIVIL ENGINEERS.

JUNE 5.—JOSHUA FIELD, Esq. (President), in the chair.

The paper read was a "Description of a Method of Rolling Bars for Suspension Bridges, and other like Purposes," by Mr. Thomas Howard, Assoc. Inst. C.E. It was described that by the ordinary process of manufacture, the head, or end of the link, out of which the eye, or hole for the connecting pin, was bored, had been sometimes welded on to a parallel rolled bar, or, at other times, been hammered to the required form; both these methods were, however, objectionable, owing, in the former case, to the insecurity, and in the latter to the tediousness and expense. By the method introduced by Mr. Howard, the bars were rolled at once into the requisite form; the shingle, or faggot, was first passed longitudinally, at a welding heat, through grooved rollers, in the ordinary manner, and then, before being drawn down to the intended thickness, was carried to rollers having bosses, or increased diameters at the places corresponding to the heads to be produced, and there passed to and fro between the rollers transversely, or across the breadth of the bar, thus receiving a pressure only at the enlarged parts of the rollers, which gave the necessarry increase of breadth at the heads; it was then taken to plain finishing rollers, and drawn out longitudinally in the usual manner, until it attained the required length and thickness; the heads being afterwards trimmed by machinery to the exact dimensions, and the holes drilled for the pins.

It was stated that the chains of the large suspension bridge, erected by Mr. W. Tierney Clarke over the Danube, at Pesth, which lately so satisfactorily withstood the heavy strain brought upon it by a retreating army, were constructed on this system at the King and Queen Iron-Works at Rotherhithe, as were those for lifting the tubular bridge at Conway, and over the Menai Straits; and also that the links for a bridge now erecting by Mr. Vignoles, at Kieff, in Russia, were manfactured by another firm, under license to use Mr. Howard's system. Some interesting observations were recorded of the results of the experiments for determining the strength of these bars, showing them to possess great elasticity and freedom from permanent set.

The discussion elicited some useful remarks as to proportions of the area of the body and of the head, and of the diameter of the pin, which, it was shown, had much influence on the resisting power of the heads; the larger the pin, the less being the tendency to rupture the eye. The process appeared to be admitted as a great improvement on the ordinary mode of manufacture, and tending to give confidence to the engineer that his designs could be executed in metal, uninjured by manipulation.

At the monthly ballot, the following candidates were duly elected:—The Earl of Rosse, President of the Royal Society, &c., as an honorary member. J. Samuel, A. Martin, H. Robertson, and W. Radford, as members. C. Cammell, R. M. Marchant, and J. A. Joseph, as associates.

The following papers were announced to be read at the meeting of Tuesday, June 12:—"On the Construction of a Collar Roof, with arched trusses of bent timber, at East Horseley Park," by the Earl of Lovelace, Assoc. Inst. C.E., and "A Description of the Bridge erected at Athlone," by Lieutenant-Colonel H. D. Jones, R.E., M. Inst. C.E.

ROYAL INSTITUTION.

The fifth lecture by Mr. Faraday, on Static Electricity, was delivered on Saturday last to a crowded audience. The effects of induction in producing the remarkable phenomena of the Leyden jar and of the electrophorus constituted the principal subject of the lecture, but it was introduced by some further explanations of the cause of the rapid emission of electricity from points. When a cylinder is made smaller at one end than the other, and a charge of electricity is induced in it, the electricity at the larger end has more space to expand in than it has at the other, and it consequently becomes more condensed, and exerts greater power to communicate with surrounding bodies. This effect is increased by diminishing one end of the cylinder to a point; and a metal point was attached to the prime conductor of the machine, for the purpose of showing in how short a time all the electricity is dissipated under such circumstances. In resuming the consideration of the phenomena of induction, Mr. Faraday explained the effects of the condensor. The condensor is an apparatus consisting of two discs of metal mounted perpendicularly, in such manner that one disc, connected with the earth, may be brought close to the surface of the other, which is insulated. When so placed, a feeble charge of electricty, which is inappreciable by the electrometer, becomes condensed, and is very manifest when the disc connected with the earth is removed; the thin stratum of air between the two discs having caused the induction of electricity in the opposing disc. When a plate of glass instead of air is interposed, the effects become much stronger, and such an arrangement forms the elements of the Leyden jar. The apparatus thus fitted, with a plate of glass between the discs, was charged by the electrical machine, and exhibited, in the density of the sparks emitted on the discharge, and the loudness of the report, the same phenomena as the discharge of a small Leyden jar. In this case the electricity from the machine, communicating with the insulated disc, induced the opposite state of electricity in the disc on the other side, which had a communication with the earth, and the glass, by its non-conducting property, having the power to keep the two electricities apart, a large quantity of electricity was accumulated on the glass; thus, when a communication was made between the two discs, all the effects of the electric shock were produced. The discovery of the Leyden jar, which gave great stimulus to electrical investigations in the middle of last century, was occasioned by the attempt to confine electricity in a bottle. A small glass bottle having been filled with water, was held by M. Cunæus, of Leyden, while it was being charged; and having put his other hand to the nail, which served for the connecting wire, he was greatly terrified at receiving a shock. The experiment was repeated by others, and the philosophers of that day being much alarmed by the power they had evoked, gave most exaggerated accounts of the effects of the shock. M. Muschenbrock, after experimenting with a small drinking glass, stated that he had been struck on his arms, shoulder, and breast, so that he lost his breath, and was two days before he recovered from the blow, which he would not have repeated for the whole kingdom of France! The convulsive action of the electric shock on the muscles is, indeed, Mr. Faraday observed, one of the most remarkable phenomena of electricity, and, viewed in relation with the electrical condition of many animals, tends to prove the connection between electricity and nervous influence. Small bottles of water, exemplifying the kind of Leyden jars at first employed, were exhibited, and in charging one of them Mr. Faraday received a shock, which though not great made him start, for he has not been able, he said, to bring his muscles to stand the effect of an electric shock, nor to receive one without annoyance. Experiments were exhibited to prove that the charge of a Leyden jar resides in the glass, and not in the tinfoil with which the glass is coated. The metallic coatings of a charged jar were changed without much loss of the charge, and a charged jar, when deprived of its interior connecting wire, manifested no trace of electricity when tested by the electrometer. The electrophorus affords nearly as curious an illustration of the effects of induction as the phenomena of the Leyden jar. When a flat surface of resin is excited, by being rubbed with dry flannel, it induces a large quantity of electricity in an insulated metal disc, from which sparks may be taken an unlimited number of times by repeating the operation of pressing the disc on the resin, touching it with the finger, and then lifting it off by the glass handle. These effects are caused by the electricity induced through the air between the interstices of the surface of the resin; for if the resin and the metal were perfectly flat and smooth, so as to come into contact throughout, the whole of the electricity would be carried off on the first application of the disc.

SCIENTIFIC SOCIETIES' EXEMPTION BILL.—An important meeting was held on Wednesday, at the City of London Literary and Scientific Institution, Aldersgate-street, of delegates from the literary and scientific societies of the United Kingdom, to consider the draft of a bill intended to provide more effectually for these societies' exemption from the payment of local rates. Besides the delegates, there were present Lord Wrottesley, Mr. W. Brown, M.P., Mr. H. C. Lacy, M.P., Mr. J. Wyld, M.P., and Mr. J. T. Smith; and delegates from the following institutions:—London Mechanics, City of London Literary and Scientific, West London Literary and Scientific, Liverpool Mechanics, Woolwich Mechanics and Literary, Westminster Mechanics, Literary and Scientific, Devonport Mechanics, the Yorkshire Union (and Leeds and Bradford, by special desire), representing together 84 institutions, City of London Catholic Literary Society, Walworth Literary and Scientific, Southwark Literary and Scientific, Jews' General and Literary, Edinburgh Literary and Scientific, Bodmin Literary and Scientific Institution, Haverfordwest, and Marylebone. Mr. Brown, M.P., occupied the chair. The report of the committee was read, stating that they had revised the bill, after great consideration of the many communications which had been addressed to them, and had fixed the extreme cases of exemption as being those who have two-thirds of their income from voluntary contributions, and one-third only from endowments. The committee stated that they had had interviews with Lord John Russell, Sir George Grey, and Sir Robert Peel, all of whom had spoken favourably of the bill, which, from the lateness of the period, they hoped would be taken up by Government, so as to ensure its passing this session. Several gentlemen then expressed their opinion of the importance of such institutions to the country, and the great evil that would be inflicted were they depressed and destroyed by financial burdens. It was agreed on all hands that the present law is a nullity. Resolutions were then passed adopting the report, and authorizing the committee to prepare a petition to Parliament in favour of the bill to be introduced. A vote of thanks to the chairman concluded the business of the day, and the meeting separated.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

TUESDAY	Gas-Light and Coke Company—offices, at Eleven.
	Direct London and Portsmouth Railway—London Tavern, at One.
	Law Life Assurance Company—offices, at One.
WEDNESDAY	University Life Assurance Company—offices, at half-past Three.
	East Anglian Railways—London Tavern, at Two.
	Mexican and South American Company—offices, at One.
THURSDAY	Grand Junction Water-Works Company—offices, at Twelve.
	Equitable Gas-Light Company—offices, at One.
	Deptford, Rotherhithe, and Bermondsey Gas-Light and Coke Company—London Tavern, at Twelve for One.
FRIDAY	General Mining Association—offices, at One.
	Eastern Counties Railway—London Tavern, at One.
	London Indisputable Life Policy Company—London Tavern, at Two.

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

BANK OF BRITISH NORTH AMERICA.

The proprietors of this company held their annual general meeting at their offices, St. Helen's-place, Bishopsgate-street, on Tuesday, the 5th inst.

J. J. CUMMINS, Esq., in the chair.

The SECRETARY (George de Bosco Attwood, Esq.) read the advertisement convening the meeting, when the CHAIRMAN rose and said, that the report about to be submitted to the meeting would contain a reference to the accounts, and they would be able better to understand the particular items after they had heard it read. Subsequently it would be his duty to reply to any observations that might be made.

The SECRETARY then read the following report:—

Another year of considerable depression in the trade of British North America has imposed on the directors of this bank the necessity of continuing the cautious and restrictive policy to which they have adverted in the last two annual reports. It is, however, with much gratification that they feel themselves justified in stating that, in the midst of circumstances producing no ordinary amount of difficulty, the commercial community of the North American colonies generally have sustained their credit in a manner highly honourable to their character as British merchants. The directors, influenced by a strict regard to the principle which has uniformly guided them of considering rather the security of the capital entrusted to them than the actual amount of profits appearing on the balance of each year's operations, have felt it right to forbid advances, which, although promising to be profitable, did not appear to them to bear the character of legitimate banking. To this principle they are determined to adhere, and they are thereby enabled to give more effectual support to the regular trade of the commercial community. In reporting the affairs of the bank for the last three years, they have been led necessarily to notice the depression of commerce in the colonies; they place, however, strong reliance upon the enterprise and industry of their fellow-subjects in British North America, and have much confidence in the growing wealth of the provinces; they trust, therefore, that this depression will prove to be but temporary. By reference to the accounts submitted to this meeting it will be seen that, notwithstanding the restricted state of the business, the directors have been enabled to make a small addition to the rest, after providing for the year's dividend at the rate of 5 per cent., again setting apart a considerable sum, sufficient to cover the estimate of probable loss. The directors have now to announce to the proprietors that a half-yearly dividend, at the rate of 5 per cent. per annum, will be payable on the 5th July next.

Balance-Sheet—December 30, 1848.

LIABILITIES.

Capital	£1,000,000	0	0
Circulation	231,137	18	4
Deposits	229,177	4	9
Bills payable and other liabilities	365,343	0	8
Reserve for Christmas dividend	25,000	0	0
Undivided net profit	57,302	18	7
Total	£1,907,961	2	4

ASSETS.

Specie and cash at bankers	£ 198,919	17	11
Bills receivable and other securities	1,672,134	5	1
Bank premises	36,906	19	4
Total	£1,907,961	2	4

Profit and Loss Account, from 1st January to 30th December, 1848.

DEBTOR.

To dividends declared as follows:—				
At Midsummer, 1848, payable July, 1848	£25,000			
At Christmas, 1848, payable January, 1849	25,000	£50,000	0	0
To balance, being undivided net profit to the 30th Dec., 1848		57,302	18	7
Total		£ 107,302	18	7

CREDITOR.

Balance of undivided net profit to 31st Dec., 1847	£ 55,502	11	6
Net profit for the year, 1848, after deduction of all current charges, and providing for bad and doubtful debts	51,800	7	1
Total	£ 107,302	18	7

MR. WEBSTER (a proprietor) said it had been his object for a long time past to get such a statement of accounts as that now submitted, and he, therefore, rose to thank the directors for it. The statement showed that theirs was not a mere shadow of a bank, but had some substance, and if the accounts had not been rendered he should have pressed for them, notwithstanding he had on former occasions been called a discordant party. As the cause of his dissent no longer existed, he need not make any further observations, and he thought that, after such a statement, their shares would not be so depressed in the market as they had been. He should wish to see every kind of economy practised.

The CHAIRMAN said the hon. proprietor was perfectly right in calling for these accounts. Every proprietor was entitled to information as to his own property. In the report of the directors allusion was made to the Canada trade, and before such an assemblage of experienced merchants, it would be needless for him to dwell upon the subject. When they called to mind the low prices of Canadian produce in the home market, arising from various causes, he considered it an agreeable fact that they were enabled to set aside enough to cover all estimated bad debts, and make an addition to the rest, and that they would not have hereafter to trench upon profits in order to meet past liabilities. The object of the directors of this bank had never been, by great advances on any undertakings or to public institutions, to swell the amount of their profits, but rather to encourage commercial dealings; and he really thought he had a right to congratulate the proprietors on their success. The item of specie in the balance-sheet represented chiefly the amount in the vaults of their establishment in the colonies. During the past year 13,000*l.* were set apart to meet probable losses, and consequently the profit would have been 64,800*l.* but for that.

MR. B. SAMUEL understood that this would warrant a dividend of 5 per cent.

In answer to a question from a proprietor, the CHAIRMAN stated that, in addition to the rest, or undivided profit, a separate reserve of 42,700*l.* had been made, to cover loss by bad and doubtful debts, which was included in the "other liabilities" stated in the balance sheet.

MR. JOSIAH WILSON observed that if the amount set aside for probable losses was sufficient, the result must be considered very satisfactory. (Hear.)

The CHAIRMAN intimated that the whole amount ascertained to be bad had been cleared off, but the amount considered doubtful, or on which there might be loss, would be provided for by the reserve of 42,700*l.*, as above mentioned.

The report was then put and carried, and the retiring directors were re-elected

A PROPRIETOR, in proposing a vote of thanks to the chairman and board, anticipated its unanimous acceptance, for he had not heard one dissentient voice to the report.

The vote was carried, and the CHAIRMAN having returned thanks,

MR. J. WILSON said, before they separated, he would ask another question. If theirs was a chartered bank without any liability to the shareholders, he should wish the public to know that they enjoyed so great a privilege, because in most other banks the whole of a proprietor's property was liable to the extent of the indebtedness. It was a subject that had struck him much, and when he found that it was a chartered institution (which he did not know till that day), with all calls paid up, and the capital intact, he could not understand why their shares were not higher, but supposed it must be on account of the condition of the money market.

The CHAIRMAN begged to state that he purposely alluded to theirs being a chartered bank, because the liability of the shareholders was limited to the amount paid up, and he was persuaded that the public did not generally know this. The meeting then broke up.

BRITISH COMMERCIAL LIFE INSURANCE COMPANY.

The annual meeting of shareholders in this company was held at the establishment in Cornhill, on Wednesday, the 6th inst.

JOHN CATTLEY, Esq. (one of the directors), in the chair.

EBENEZER FERNIE, Esq. (the managing director), then read the following

REPORT.

In compliance with the regulations of the Deed of Settlement, the directors beg to report to this general annual meeting the result of the last year's operations, and to lay before them the statement of the accounts of the company, verified by the auditors. The peculiar circumstances of commercial affairs in the year 1848 rendered increased caution necessary in the acceptance of risks, and tended to diminish new business; but the directors have the pleasure to inform you, that the insurances effected in the present year have exceeded those of several preceding years within the same period. The claims arising from deaths in the year 1848 were fewer in number, and smaller in amount, than for several years past. The profits from lapsed and cancelled policies were satisfactory, and there was no loss upon the whole of the policies which were closed in that year, whether by deaths, cancelments, or purchase; but, on the contrary, the amounts received exceeded the sums paid, or payable, upon them, and left a considerable gain to the company thereon. Two of the directors—viz.: Thomas Benson, Esq., and Denzil I. Thomson, Esq., retire from office by rotation, being eligible for re-election. You will be pleased, therefore, to fill up these vacancies.

A PROPRIETOR suggested that the dividend of 7½ per cent. should be raised to 8 per cent. per annum, which he thought was justified by the favourable state of the accounts.—The CHAIRMAN said, that it was not usual to alter the rate of dividend except at the septennial meetings, and recommended the hon. proprietor to let it stand at 7½ per cent. per annum.—A PROPRIETOR said, he did not mean by the suggestion to cast the slightest reflection on the directors, and the motion was withdrawn.

In answer to a question, as to the amount of gain by the policies closed by deaths and cancelments in the last year, the MANAGING DIRECTOR replied, that it was 9390*l.*

A PROPRIETOR enquired whether the amount invested in railway shares was secure?—Mr. FERNIE replied, that the money was not in railway shares, but in railway mortgage bonds; and the CHAIRMAN stated, that upon those bonds the company got a much larger interest than by the public funds, and their money was quite as secure.

Mr. VAUGHAN then moved that the report and accounts now read be approved.—Mr. PORTER seconded the motion, which was agreed to unanimously.

The CHAIRMAN said their next business was the election of two directors, Thomas Benson, Esq., and Denzil Ibbertson Thomson, Esq., retiring this day by rotation, and being eligible for re-election, both those gentlemen were re-elected unanimously.

The CHAIRMAN said it only remained for him to state, that as their meeting was very small, he hoped it might be taken as an intimation of the confidence the proprietors had in the directors. (Hear, hear.) The board of directors did all that depended upon them, and he hoped the proprietors would also do all they could; and the best way to serve both themselves and the directors was to bring all the good insurance business in their power to the office.

Mr. VAUGHAN said he had great pleasure in moving a vote of thanks to their worthy chairman and directors. (Hear, hear.)—The motion was immediately seconded, and passed unanimously, when the meeting separated.

PROFESSIONAL LIFE ASSURANCE COMPANY.

A special meeting of proprietors in this company was held at their offices in Cheapside, on Tuesday last—Major HENRY STONES in the chair—for the purpose of electing two directors, and also, in the words of the notice convening the meeting, for the purpose of considering whether or not (in consequence of the 20,000 shares into which the capital of the company is divided having been all sold and disposed of, and proving insufficient to meet the public demand, there being already applications made for more than 4000 shares over and above the said 20,000) it will be advisable to increase the number of shares by reducing the amount of each share, and of supplying the deficiency in the capital thereby occasioned by creating and issuing additional shares.

The advertisement convening the meeting having been read, the CHAIRMAN expressed his gratification at being again able so soon to meet the proprietors, and hoped, at the next meeting, to see some of their lady proprietors, who were equally interested with themselves in the importance of life assurance. (Hear.)

Mr. ELDERTON read the following report:—

The directors feel much pleasure in meeting the shareholders of the company on the present occasion, and in reporting to them what appear to the directors to be the gratifying and satisfactory circumstances which have induced them to call the present extraordinary general meeting. The objects for which this meeting is held are two-fold—first, for the purpose of electing two additional directors. It may be in the recollection of the shareholders that, at the last general meeting, it was stated by the directors in the report that two gentlemen, of well-known influence and respectability, would in due course become candidates for the offices of director of this company. Those gentlemen were Mr. Durham, of Cross-deep Lodge, Twickenham, and a director of the London and County Bank; and Mr. Williams, of Northampton-place, Hackney-road, who for many years represented the ward of Cordwainers in the Common Council of the City of London. These gentlemen having become duly qualified by holding 500 shares in the capital stock of the company in their own right, for more than three calendar months, and being, as before stated, of well-known influence and respectability, the directors unanimously recommended them to the shareholders as fit and proper parties to fill the responsible and honourable office of directors of the company. The other object of the meeting, as stated in the advertisement, is to consider whether or not (in consequence of 20,000 shares, into which the capital of the company is divided, having been all sold and disposed of, and proving insufficient to meet the public demand, there being already applications made for more than 4000 above the 20,000) it will be advisable to increase the number of shares by reducing the amount of each share, and of supplying the deficiency in the capital thereby occasioned by creating and issuing additional shares. It is not without feelings of considerable pleasure and gratification that the directors revert to the circumstances which have given rise to this question. Those circumstances are shortly these: at the date of the last general meeting there remained of the shares in the capital stock of the company, unsubscribed for, the number of 6316 shares; within six weeks from that time, the whole of those shares were taken up and disposed of, and the objects and principles of the corporation had become so fully appreciated, that it became evident that the 20,000 shares into which its capital was divided would be altogether inadequate to meet the public demand. In a very brief period of time applications were made for more than 4000 shares over and above the 20,000, and the directors, therefore, considered whether it would not be expedient to take some steps to prevent the applicants for shares from being disappointed. The directors were advised that there were three modes, by either of which the object the directors had in view might be attained—firstly, the company might, under the 41st clause of their Deed of Settlement, reduce the amount of each share, and supply the deficiency thereby occasioned in the capital of the company by the creation and sale of additional shares; secondly, the company, under the 42d clause of their Deed of Settlement, has power to increase their capital to any amount by the creation and sale of new shares; thirdly, the company might act under both those clauses, by reducing the amount of each share, and supplying the deficiency in the capital thereby occasioned by the creation and issue of the number of additional shares necessary for that purpose, and by increasing the capital by a further creation and sale of new shares. After much consideration, the directors determined to recommend the shareholders to adopt the first mode—namely, to reduce the amount of each existing share, and to supply the deficiency thereby occasioned in the company's capital by the creation and sale of additional shares. The directors accordingly recommend that the amount of each existing share be reduced from 12*l.* 10*s.* to 8*l.* And that the sum of 90,000*l.*, the deficiency thereby occasioned in the capital, be supplied by the creation and issue of 11,250 additional shares. The directors believe that the adoption of the course recommended by them will prove highly beneficial to the shareholders; and, by placing the subscribed capital of the company in the hands of a larger number of proprietors, it will greatly increase the security of the assured. The directors have ever wished to form an extensive and respectable proprietary in the country, as such a proprietary will, in their opinion, be a certain means of increasing the business and stability of the corporation. That object, the directors believe, will be best attained by the course they now recommend, inasmuch as the present applications for shares (now more than 4000 over and above the original 20,000) are principally from parties residing at different parts of the kingdom. The company's Deed of Settlement, however, requires that new shares should be offered in the first instance to the existing shareholders, and should the meeting adopt the course recommended by the directors, they will take care that the requisites of the Deed of Settlement are complied with.

Mr. HART (a director) proposed Mr. Durham as a director, which was seconded by the Rev. Mr. GLEADALL.—Mr. J. MONTEFIORE (a director) proposed Mr. F. G. Williams, as the other director, which was seconded by Mr. TEULON: both proposals were agreed to unanimously.

Mr. DURHAM returned thanks. He declared that no effort on his part should be wanted to promote the welfare of this institution. With regard to life assurances generally, he believed that, in the course of a few years, they would find a large increase in the number of offices. He could mention one circumstance that came to his knowledge within the last year, where a solicitor, aided by two noblemen, had, by insuring the lives of their tenants and

his clients, with whom they were all personally acquainted, issued policies to the extent of 10,000*l.* or 12,000*l.* a year. This made such an impression on that gentleman's mind that, as soon as he got leisure, he intended to get some office to receive them on favourable terms, and, if not, to establish an assurance company himself. (Hear, hear.) This, as well as other circumstances, must bring them to conclude that there was plenty of room for the success of an establishment founded on such principles as the "Professional Life Assurance"—indeed, its rapid success, since the short period of its establishment, was a guarantee that it bids fair to become one of the most flourishing establishments in the metropolis. (Hear, hear.) It was not necessary for this purpose that they should have a large paid-up capital; this was proved by many of the old companies, who found their large capital attended with inconvenience; for it required a great deal of profit to make up a dividend to the shareholders, when, by good management, large profits might still be made by only a small paid-up capital. He would again repeat, that his best attention should be given to promote the interest, of this establishment. (Applause.) —Mr. WILLIAMS also returned thanks, and pledged his best efforts for the advancement of the society. (Applause.)

The CHAIRMAN begged to move the adoption of the report; and, in doing so, said he would only detain them while he made a few observations relative to the recommendation it contained regarding the alteration in the value and number of their shares. When they last met, it was stated that the strength of the institution must depend upon the superstructure upon which it was raised, and he trusted that that was now so firm as to ensure the security of the institution. (Cheers.) In offices of that description it was desirable to extend as far as possible the number of parties interested in them, as they became agents to promote the interests of the company; while, at the same time, they should not inconveniently extend the amount of their capital. (Cheers.) Acting upon this principle, they had, under the advice of their actuary, limited their capital to 250,000*l.*, being perfectly convinced that it would be amply sufficient for all their purposes, and that capital was divided into 20,000 shares. Two years since, when the company was established, a panic had taken possession of the mind of almost every man of business, and even this company had caused some of them sleepless nights, in considering whether the shares would be taken up. But now affairs were altered, and they were called together to consider whether they should extend the number of their shares; and, in doing so, they might look upon the question even in a sordid view, as every proprietor admitted became an agent for the company, and thereby their business would be increased, *pari passu*, with the increase of their shares, from 20,000 to 30,000. (Hear.) At the last meeting they were informed that there were about 5000 shares still unallotted, and there was no doubt they would soon be taken up. That anticipation had, within three months, been more than realised, for not only had they all been disposed of, but they had received applications for 5000 or 6000 more. He would not detain them by detailing the way in which it was proposed to admit the applicants to participate in the advantages of the company, as he considered that such details would come with much better grace from the lips of Mr. Baylis, to whom they all naturally looked up for information of that description. (Cheers.)—Mr. WOOLLAT seconded the resolution, which was carried unanimously.

Mr. TEULON rose to propose a resolution for carrying out the recommendation contained in the report. He (Mr. Teulon) had originally taken a few shares in the company, without the slightest idea of getting others to join it; but having narrowly examined the principles, he had since had the pleasure of disposing of upwards of 3000 shares among his friends. In fact, he never met any person without speaking of the company, and the previous evening he had the pleasure of talking about it to a gentleman who was connected with another office, who said that its progress was "slow, but it was sure to grow." Now, he thought no higher compliment could be paid to them, as it was not the shrub that grew to maturity in a few days that they looked to with the greatest admiration, but to the oak of the forest, which, though slow of growth, would live and flourish for centuries. (Hear.) Such he believed would be the case with their company, and he had great pleasure in proposing a resolution for constituting 11,250 additional shares, in conformity with the recommendation contained in the report.

The CHAIRMAN having called upon Mr. Baylis to give the shareholders his opinion upon the question before them, Mr. BAYLIS rose and said, that he need hardly inform the proprietors that that was to him indeed a proud and delightful day. He had never had the slightest doubt himself as to the stability and success of the institution; but he had not anticipated so soon having to meet the proprietors to ask them to make arrangements to allow others to enter the company, and participate with them in the benefits wh ich were sure to flow from it. (Hear, hear.) The company, he had no doubt, would continue to increase in prosperity for many years to come. So self-evident was it, that the more friends they had the greater business would they do, and that the greater the business the greater the profits, that for that reason he recommended them to adopt the proposition placed before them by the directors, though he would hereafter advocate shutting the door against the admission of new proprietors. (Hear, hear, hear.) In his opinion there was no necessity for having a too large nominal capital; and he believed that the less that was paid up, the greater would be their prosperity. He considered it no boon to him as a shareholder to reduce his shares from 12*l.* 10s. to 8*l.* Indeed, he believed it would be a temporary loss; but, as he believed that the system on which the company was based was the good of man, it would outlive almost all others; and he considered that no good man would object to make a temporary sacrifice for the purpose of admitting others to the advantages of the institution. By the principle on which that institution was founded, the proprietors were carrying out the most beneficent principles of Christianity, as, by a little care, a little self-sacrifice, all who became proprietors would be securing themselves against poverty in their declining years. (Cheers.) The advantages of life assurance were yet but little understood; but how many accomplishments, how many virtues, would have been saved from the streets and degradation, by a little money placed in their hands at the death of a parent or protector. Life assurance was surely then a duty they owed both to themselves and to others. He had been often asked how it would be possible to provide a fund for the preservation of their members from poverty, and at the same time to pay them a profit. He replied, nothing was so easy; and he would show them that, if they only put by one-tenth of their profits, what a splendid fund that was soon likely to create. The very day in March on which they held their annual meeting, another office met, and, on a capital of 500,000*l.*, after five years, declared a bonus of 188,000*l.* (Cheers.) That office had great influence at home and abroad; but, save the fact of its being a life office, had no particular principle to recommend it. One gentleman who had formerly held 10,000*l.* stock in that company had been, by bankruptcy, reduced to poverty, was the other day a candidate for a situation of 80*l.* a year, which he lost. Now, had the principle existing in this company existed in the company to which he had alluded, that gentleman would not have been reduced. (Cheers.) As on 500,000*l.* paid-up capital that company had in 10 years paid 15 per cent., if they had equal success, and he believed they would, he ought not to be taxed with being a visionary if he said that on a capital paid up of 20,000*l.* they might live to divide a profit of 200 or 400 per cent. To secure that the shareholders had only to bring two or three policies each to the office during the next year, and then they might fairly feel they had done their duty. One great reason why he urged them to make an extension in the number of shares was this—they at present had no shareholders in Edinburgh, none in Glasgow, none in Paisley. They had recently obtained a great many shareholders in Liverpool; and he was happy to say one gentleman, whom he saw present, had himself obtained 30 or 40 shareholders in Poole, actuated by his friendship for their agent, who had himself obtained 30 or 40 more in the same town. (Hear, hear.) Now they ought not to lose the opportunity which was presented to them of obtaining shareholders throughout the kingdom; and if they did so, he felt assured that this company would soon become the assurance office of the world—(Cheers)—for he would not be satisfied with London only. (Cheers.) He trusted that the resolution would be unanimously carried, and that when they met in March next they would be able to congratulate one another on the fact that no office stood higher than the "Professional."

The Rev. Mr. MUMMERY moved an amendment to the report, to the effect that the amount of shares be increased without diminishing the capital; but that the new shares be not issued, except at 2s. 6d., or 5s. premium, in justice to the original shareholders.—The Rev. Mr. PEGG seconded the amendment.

This led to a long discussion, in which Mr. Hart, Mr. Wellington Cooper, the chairman, and the Rev. Mr. Gleadall (all directors), took part, in support of the views of the board, as explained in the report just read to the meeting.

A number of shareholders took an opposite view of the subject, and maintained that the new shareholders ought not to be put on a par with those who had borne the burden and heat of the day.

The CHAIRMAN thought it would be unfair towards the public, after inviting them to come in, to inflict on them even a trifling sum of 2s. 6d. or 5s. premium. (Hear, hear.)

Mr. BAYLIS (the actuary) protested against their inflicting on the public a premium on taking the new shares. One of the gentlemen who advocated the amendment so strongly had only become a shareholder recently, but he was still most happy to see that gentleman amongst them, because he had said that there was something in the plan of this office that so delighted him—something so benevolent, reasonable, and practical, that induced him to belong to it, for he had long before selected many offices to become a proprietor, without being able to decide. (Applause.) He (Mr. Baylis) was as selfish as any man, and as anxious to get a premium, but it must be a premium that he could look to afterwards with satisfaction—(applause)—a premium derived from the real business of the office—a premium for the real good that had been done, or, in other words, a reward of merit. (Applause.) When they had issued circulars to invite new friends to take shares, would it be fair to tell them that they must pay an additional charge of 2s. 6d. beyond the deposit to get those shares? Why, their reply might at once be, we do not want your shares. (Hear, hear.) He had foretold from the first that this would be a great office, and, to justify his opinion, he took 150 shares at a time when it was least thought of, for he never believed that it was in danger; and he hoped it was now clear to all, that they had put the society beyond danger. (Hear, hear.) He had the pleasure of receiving 20 powers of attorney, during the last week, to admit friends to the meeting; but what would have been the consequence, if he had to tell those parties that they must pay a premium of 2s. 6d., or, as some gentlemen would have it, 5s.? Before they asked for a premium, let it come from their business; they would then have something to stand upon, but, till then, let them scout the idea of a premium on their shares.

On a vote being taken as to whether the shares should be issued at a premium, the proposition was negatived by about 50 to 4, amidst loud cheers.

A modification of the original resolution was then proposed by Mr. ELDERTON, and seconded by Mr. WOOLLATT, the object of which was to reduce the price of the shares from 12*l.* 10s. to 6*l.* 5s., and increase their number from 20,000 to 40,000, thus keeping to the original amount of capital. This was passed unanimously.

A cordial vote of thanks having been given to the chairman, the meeting separated.

CHURCH OF ENGLAND LIFE AND FIRE ASSURANCE COMPANY.

The annual meeting of this company was held on Friday, the 8th inst., at the establishment, in Lothbury.

Major JAMES OLIPHANT (East India director) took the chair, when a very favourable report was read. It stated that the new policies, during the past year, had considerably exceeded those of any previous year since the office had been opened. The entire amount of claims paid in the year had barely exceeded the receipts on the lapsed policies during the same period. In the fire department an increase had also taken place; and the entire amount of losses did not reach one-fourth of the receipts. The increasing number of policies on the lives of clergymen, showed the confidence that profession had in the stability of the institution.

The report was adopted; and the meeting seemed gratified at the large amount of new business effected by this office, in spite of the competition it had to contend with from so many others recently established, and looked upon it as an evidence of the distinguished position held by this company in public estimation.—A vote of thanks was unanimously passed to the chairman and directors, and to the officers of the establishment, when the meeting separated.

GRAND JUNCTION CANAL COMPANY.—The half-yearly meeting of proprietors was held on Tuesday last, at which a dividend was declared at the rate of 5 per cent. per annum, leaving a surplus of 2303*l.* to be carried to reserve fund. The report stated that the experiment adopted by the company in becoming carriers continued to yield satisfactory results. In July last they carried 2126 tons, the receipts in connection with which were 293*l.*; while in March the number of tons had risen to 9930*l.*, and the receipts to 11,087*l.* It was also added, that the competition between the North-Western Railway Company and the canal had, "by recent arrangement, been confined within legitimate bounds." The canal and works have cost, from first to last, a sum of 1,785,730*l.* 6s. 8d., which is now represented by a capital of 1,145,500*l.*; the remainder of the cost having been from time to time defrayed, or repaid, out of the profits of the undertaking, and the capital account having been closed since 1818. The company has no debt whatever, and is under no guarantees to other parties, and holds no leases of other undertakings. In addition to the navigation itself, and the works essential to it, the company possesses a large rest, of which 11,502*l.* 6s. 10d. is in cash or convertible securities, and the remainder is invested in ground rents, houses, building land, and other improvable real property, producing a clear yearly rental of 714*l.*; besides which, the company is secured, by Act of Parliament, in the payment of water rent, yielding 2000*l.* yearly. The whole rest may be taken, at a moderate valuation, to be worth 240,000*l.*

GRAND UNION CANAL.—The half-yearly meeting of proprietors took place on Monday last, at the office, Surrey-street, Strand.—The report of the committee stated that there had been a decrease on the tonnage for the six months ended 31st March last, as compared with a similar period of 1848, 1051*l.* 1s. 1d., and on the 12 months, 2423*l.* 19s. The receipts, including balance at last account (6200*l.* 10s. 11d.), were 9861*l.* 0s. 4d.; and expenditure, including dividends (2061*l.* 17s. 6d.), 3131*l.* 0s. 2d.: leaving balance in favour of the company of 6730*l.* 0s. 2d.—A dividend of 17s. 6d. per share was declared, payable on Monday, the 18th inst.—The report stated that, notwithstanding the decrease in the tonnage, it was gratifying to observe that there was a decided improvement in the coal trade during the last two months, which led to the hope that the receipts would improve before the next general meeting.

REGENT'S CANAL COMPANY.—At the half-yearly meeting, on Thursday the balance of profits shown was 10,881*l.* 1s. 9s., making, with the amount remaining from last account, 11,248*l.* 14s. 10d., from which a dividend of 10s. per share was declared, and 539*l.* 14s. 10d. carried to the reserved fund. The reserved fund, at the close of the current half year, is expected to reach 10,000*l.*

HAMMERSMITH-BRIDGE.—The annual general meeting of proprietors was held at the British Hotel, on Thursday, when a dividend was declared, and Messrs. Bolleau, Barton, Coe, Greenhill, and Hedges, who retired by rotation, were re-appointed on the committee of management. The statement of accounts showed the receipts of the year, including a former balance of 185*l.* 10s., and bridge and pier tolls of 3118*l.*, and other items, amounted to 3963*l.* 9s. 1d. The expenditure reached the same amount within the sum of 429*l.* 16s. 6d. now in the treasurer's hands.

WATERLOO-BRIDGE.—The half-yearly meeting of proprietors was held, on Thursday, at the Freemasons' Tavern, to receive the report for the half-year ending 23d February.—WILLIAM ANDERSON, Esq., in the chair.—The receipts amounted to 8034*l.* 1s. 3d. from foot passengers and tolls by horses, which is an increase of 859*l.* 15s. 10d. compared with the corresponding period of the previous half-year. The disbursements amounted to 1425*l.* 15s. 3d., leaving 1295*l.* 16s. to pay interest on bonds at 5*l.*, 4*l.*, and 3*l.* 10s. per cent., and 5312*l.* 10s. to pay dividend of 2s. 10d. in 1*l.* on annuities upon 37,500*l.*, due this half-year, there being no dividend for the shareholders.—The report was adopted, and thanks were voted to the chairman.

HIBERNIAN BANK.—At the half-yearly meeting of this company, the usual dividend of 5 per cent. per annum was declared. General satisfaction was expressed by the shareholders, and a vote of thanks passed to the directors.

THE BRITISH BANK.—We understand that the Board of Trade have approved the Deed of Constitution of the British Bank, which has been laid before them preparatory to the grant of the Charter.

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

VICE-CHANCELLOR'S COURT, JUNE 4.

This was a petition under the Joint-Stock Companies Winding-up Act, 1848, by a party alleging himself to be a shareholder. It appeared, however, on the petition being opened, that the petitioner had, in February, 1849, presented his petition to the Court of Bankruptcy, under the statute 7 and 8 Victoria, c. 70, for protection, and to have a proposed arrangement between himself and his creditors carried into effect. Under that petition a trustee was duly appointed. By the 8th section of the above statute it is provided that all the estate of the petitioner shall vest in the trustee as fully as if he were an assignee. Before the petition was opened his HONOUR suggested, that as he observed from the name of one of the parties, some one connected with himself might be considered materially interested in the matter, the petition had better be heard by another Judge.

Mr. SWANSTON, Mr. RUSSELL, and Mr. MALINS concurred, not only in the willingness that the petition should be heard here, but stated the anxiety of the parties that his Honour should dispose of it.

Mr. SWANSTON and Mr. HETHERINGTON, under these circumstances, argued that as the order of protection was obtained not in the ordinary way only, but with a view that an arrangement, which had been proposed, might be effected between the petitioner and his creditors, it might be that he was so far from a man unable to pay everything he owed, that he might be of substance to be effectually a contributor to the payment of the debts and liabilities of the company.

Mr. RUSSELL and Mr. W. W. COOPER appeared for the company, but were not called on.

His HONOUR (Knight Bruce) said—*In hoc statu* I cannot proceed upon this petition. If the petitioner desires to serve the petition on the trustee under the Act, I will think what course I shall consider it right to take. I give no opinion, however, whether even then I shall make any order under the Act upon this petition. If any party wishes the petition to be served on any other person not already served with it, I will give leave; but again I say, I give no opinion for or against the proposition, whether under any circumstances or on any service an order can be made on this petition.

Mr. SWANSTON said his client certainly wished for the opportunity of serving the petition on some party not already served with it.

Mr. RUSSELL and Mr. W. W. COOPER were heard against the petition standing over.

Mr. MALINS and Mr. TERRELL, for several shareholders who were unwilling that any order should be made under the Act, also opposed the petition standing over,

His HONOUR directed the petition to stand over, with liberty to serve it on any party not already served, and intimated that the petitioner must use due diligence in bringing it before the court. He had only heard the petition so far at the request of all the parties, and would again express not only his willingness, but his desire, that it might be disposed of by some other Judge.

CALEDONIAN RAILWAY.—The opening of this company's Clydesdale Junction line, and of their new station at Southside, in Glasgow, took place on Friday, the 1st inst.

OPENING OF THE MANCHESTER, BUXTON, MATLOCK, AND MIDLAND RAILWAY.—This railway, which runs from the Ambergate station of the Midland Railway to Rowsley, communicating with Matlock, Bakewell, Chatsworth, and Buxton, is now open for public traffic.

THE UNFAILING SUCCESS OF HOLLOWAY'S PILLS AND OINTMENT IN THE CURE OF RINGWORM AND DISEASES OF THE SKIN.—A medical gentleman residing at Lima, whose child had been severely afflicted with Ringworm for upwards of six years, tried every known remedy to cure this dreadful disease, but in vain, as it was of so inveterate a character that it baffled the skill of himself and other practitioners. As a last resource, he was persuaded to use Holloway's Ointment and Pills, those medicines having obtained much celebrity in all parts of South America, and they had the happy effect of soundly curing the child, and perfectly eradicating the disease from the system. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

FOREIGN INTELLIGENCE.

SARAWAK, MARCH 29.—The working of the antimony ore is at a standstill—not for want of ore, for that abounds, but through the winding-up of the owners' affairs. The Chinese who are working the gold-dust up the river, are a turbulent, encroaching, overreaching set, and who are mean enough to refuse paying the small sum demanded per month for the privilege of working it, which is all that is exacted of them, there being no taxes or port charges. One of their number was punished for adulterating the gold-dust with sand on the 17th inst.; the same day five native craft sailed from here for Singapore, carrying some 600 bankals, which sell there at from 27 to 30 Spanish dollars per bankal; they also took a great quantity of gutta percha which fetches about $13 per picul at present; but they are not so enterprising as they would be were the Sarebas and Sakerran pirates effectually silenced, of whom they are in great dread. The latter villains paid a visit to a native town (Sadong), and murdered, in cold blood, 92 individuals, and cut down the standing crops of rice. It was rumoured that the English Government intended taking effectual steps for the suppression of these marauders, and much was expected from the appointment of Sir James Brooke; but all is at a stand—in fact, retrograding—and these tribes are increasing in number and importance to the annihilation of the native traders; and we hear that not a single vessel of our large squadron at present on the East India station is in the vicinity of either the Straits station or Borneo. A small native craft was picked up, a few days back, off Tanjong Datu, which had sailed a few days prior, bound to Pulo Lingin; the craft was stripped of everything, and the headless trunks of seven of the unfortunate crew discovered in her, the Sakerran dyaks taking the heads of their victims to adorn their primitive dwellings, around which they are hung, having been duly *preserved* and *pickled*, as trophies of victory. It is a blot on our escutcheon that, with the fleet we have in those seas, such practices are allowed to maintain, when, with due attention, they might, long ere this, have been chronicled with "things that were." I hope to make a trip up into the interior before long, when I will forward you an account of the method of working the gold-dust and antimony ore.

It seems to me very singular that the English Government should delegate to any company the working of the coal at Labuan—why not work it with convict labour, for the supply of at least their own vessels? During a recent visit, it was found (which has been communicated to Sir J. Brooke, and used by him in a letter to Earl Grey) that the seam at present at work presented the following appearances:—The coal is first perceptible about half-tide, emerging above the sand on the sea-beach; thickness of the vein at this spot about 18 in., running upwards into the jungle at an angle of from 15° to 20°, in a north-westerly direction. About 120 yards from this spot, this vein has increased in thickness to nearly 12 feet; and at that portion now in work, about 100 yards to the westward, to 14 feet at its lower and 16 feet at its upper end, from which spot over 600 tons have been already extracted, and placed under sheds at high water-mark. This seam was traced (still ascending and increasing in thickness) for upwards of 400 yards, when further progress was stopped by the density of the jungle. There is, at the lowest estimate, at this spot now at work over 2,880,000 cubic feet, nearly (allowing 30 cubic feet to the ton) 100,000 tons, all of which is *above* and *within* 500 yards of *high water-mark*, and the seam increasing greatly in thickness as it recedes to the westward; the next 500 yards will have considerably more than the foregoing. This seam, doubtless, crosses the island, the other end having been found cropping out by Capt. Hamilton, M.N.I., and another, on a late visit to that side of the island (February, 1849), and which would give it a length of nearly three miles, according to the chart of Pulo Labuan, surveyed by Sir E. Belcher. The major part of the materials for the formation of the works exist on the spot—splendid wood, sandstone, and clay abound. There are no mechanical difficulties to overcome—Nature herself has almost formed the spot for its intended purpose. All that is required for its completion is a few English artisans, the requisite rails and waggons, and all might soon be in useful operation, situated, as Labuan is, central nearly from the principal depôts.

The consumption of coal in the Indian Archipelago is already immense; what it would become when procured at the reduced rates that it might from Labuan, is impossible to imagine; but consider for one moment the vessels that would gladly, for their own interests, use it—viz.: her Majesty's steam marine on the East India station, those of the Spanish Government running between Manilla, and Singapore with the mail, the vessels of the Peninsular and Oriental Company in the Indian and China seas, together with the new line about starting between Singapore and Sydney—would render the coal mines of Labuan "gold mines" to the revenue of this colony. I unfortunately lost the *Mining Journal* containing the analysis of Labuan coal; but, from having seen it used in the *Auckland*, *Pluto*, and *Nemesis*, I have no hesitation in stating it to be about equal to good Scotch coal, or perhaps more like the Staffordshire; it is certainly *not* West Hartley, nor is it to be named in a day with good Welsh. There has been some coal landed at Singapore from Sydney, and sold as Sydney Newcastle coal, that name having been given to the place at Sydney from whence it is taken. The quality is very inferior to the Labuan, and not to be named with Newcastle. They have adopted the tricks of bakers and linen-drapers—placing the word "Sydney" very small, and "Newcastle" very large. It is a coal that clinkers tremendously—more than any I have ever seen. I have tried some coal out here (I think it was called Warlich's patent fuel), which is the best I ever tried, especially in a locomotive boiler. I had that, and some made by, I think, Mr. Morris, of Liverpool; they were certainly the best patent fuels I ever tried—infinitely superior to Wylam's, which eventually clogs the tubes; and I should like to see some account of it, and experiment with it, in England, likewise the Government analysis and report* which I hear has been made upon the subject. How would it do on the railway lines? —it burns well in a locomotive boiler here, with the blast pipe.

VALPARAISO, MARCH 30.—This place has been infected to a great degree by the California fever, and a very large number of emigrants have already left, and many more only wait particular intelligence, expected in the course of two months, to follow in their footsteps. Large pieces of gold are exhibited here as having been dug up out of the earth in California; one piece (certainly by far the largest of any yet seen) weighs 25½ ounces. This seems almost incredible; but, nevertheless, it is vouched for as a positive fact—in the face of which it is not surprising that men are eager to emigrate. Still, no doubt, the picture has its dark side as well as its golden one; and *certain* fevers, agues, and colds, with great privation, in the midst of gold, are no insignificant items to be taken into account, in balancing an opinion *pro* and *con*. One case (and, I am assured, a true one) will serve to explain. A man is seriously ill, and asks his fellow-workman to take him to San Francisco, a distance of 30 miles, for medical treatment, offering him half his gold for the duty; he refuses; he next offers all his gatherings, if they will only remove him hither, to which they coolly reply, "No, you will be sure to die, and then we can *take* all." We have had regular supplies of sugar from Brazil, as also of coal and deals, none of which articles have come to a good market, though brought thither at very low freights. Copper in bars, $13 4 c. has been paid; saltpetre, no sales, nominal 11½ ql. to 12 ql. Bar silver having accumulated for want of purchasers, it not having any other destination but that of simply being exported in bars, and the Copiapo Mines continuing abundant, has fallen to $9 7 mcs. Mexican accounts state that the duty which had hitherto been levied on gold imported from Upper California into Mexico had been removed.

PANAMA, APRIL 25.—The emigration by this route to California still continues. At present, there are on the isthmus about 2700 Americans; and such is the desire and enterprise to reach the gold region, that, for want of conveyance, many have joined together, and purchased small craft, not of the best description, from 20 to 70 tons, at most exorbitant prices; others are fitting out canoes. Passage money by them, $100 per head. There are vessels in the bay fitting out sufficient to carry off (say) 800 or 900. The Bremen ship, *Humboldt*, 540 tons, was purchased to-day for $60,000, on speculation, by some of the emigrants, who advertised her for passengers—cabin, $350; steerage, $250; common ship fare for all. It is doubtful whether they can fill her up at that rate. Much discontent has prevailed lately among the emigrants, and meetings held to prevent, if possible, further schemes being carried out by some of the adventurers to fleece their countrymen. Current rates of passage from this to San Francisco, $250 cabin, $200 steerage. The steamer, *California*, long overdue, has been heard of at San Blas, watering 14 days from this. Discontent appears to have prevailed, being too crowded: 320 passengers on board. Any vessel advertised for passengers here (Panama), at $250 and $200, fills immediately, the money paid down, and no questions asked whether seaworthy or not. The English line of steamers on this side are coining money—vessels, of 200-horse power, of about 600 or 700 tons, making $20,000 to $25,000 monthly, besides the grant of 20,000*l.* per annum from the British Government; $750,000 in specie and bullion leaves this city to-day for Chagres, for shipment in the Royal Mail steamer, on the 25th. Rates of passage money are reduced from this to San Francisco. The *Sylph*, American ship, filled up yesterday, varying from $150 to $200, according to accommodation.

CALIFORNIA.—The advices we have received from California came down to the 28th of March. New and richer deposits of gold are said to be discovered daily. According to one account, the Californians refused to recognise General Smith, who was sent out as military governor of the territory, and had taken steps to organise a Government for themselves. According to another, he had virtually taken back the prohibition which he had issued at Panama, forbidding foreigners to dig for gold at the "placers," and had organised a good police at San Francisco, and executed his authority without hindrance; but what is certain is, that the people had resolved to summon an assembly to sit at San Francisco, and frame such laws as may be necessary for the preservation of order and the regulation of trade. This body is to consist of 15 members. Three judges are also to be chosen—all by universal suf-

* Fully detailed in the *Mining Journal* of March 17, 18, and 25, and April 1 and 8, 1849.

trade, of course. This organisation, it is understood, was to go into effect immediately. Several meetings had been held at San Francisco to propose the introduction of the slave trade. The report of the discovery of gold in Oregon is contradicted. The mail steamer, *California*, still lay motionless at San Francisco. There had been a mutiny on board the United States' ship-of-war, *Ohio*, owing to the desire of the men to get off to the gold region. Some 30 men had been put in irons by the commodore, and many would be hung.—A letter, dated San Francisco, March 12, states that emigration to the mines had commenced, and the number there from Valparaiso was not far short of 3500, and from Talcahuana 500. It is thought that the steam-ship *California*, which has now been lying deserted for some time, will be able to get away by or on the 20th April, manned by amateur sailors, consisting of such as wish to get back home with their gold. The agent of the steamer has offered $200 per month for regular sailors in vain. Goods continued in good demand. There was great speculation in lands and lots. The gold fever ran high. The United States' steam-propeller, *Massachusetts*, arrived at San Francisco on the 25th February. Owing to the immense number of people arriving at San Francisco, the whole country was considered in a very insecure state.—A second letter, dated March 17, states that the steamer *California* was still there, with no one on board save the captain and mate. The merchants of the place were exerting themselves to obtain a crew. Those who had deserted had been enlisted for three years. The engineers fled with the crew. Commodore Jones said it was of no use to put marines on board, for they would desert with the crew.—Messrs. King and Sons, in New York, had insured in three offices, on $300,000 in gold-dust, shipped in San Francisco on board the steamer *California*; but the crew having deserted, how is the gold-dust to be sent home?—The season for digging had not fully arrived. Large parties were to leave on the 18th for the "diggings." The place was immensely crowded.

The *Demerara Royal Gazette* mentions, on the authority of the Governor of Oronoque (Venezuela), the discovery of valuable and productive gold mines in the district of Upata, near the River Urnare, in the province of Guiana, and at a distance of only five days' journey from the city of Bolivar, consequently in the immediate vicinity of the colony of British Guiana. The particular spot where the mines are situated is at the foot of an extensive range of mountains not far from the River Cayone, a river which intersects a portion of British Guiana. So auriferous is the newly-discovered gold region said to be, that the extent of its limits had not exactly been ascertained. Specimens of the gold had been brought to the city of Bolivar by the Indians inhabiting the frontiers between British and Venezuelan Guiana. It was found for the most part embedded in stone of a pure white colour, and was pronounced to be of the finest quality by the most eminent jewellers, by whom it had been tested in Bolivar. The *Gazette* remarks that this information is by no means improbable, as Guiana has been but little explored, the coasts only being cultivated by Europeans, and that ever since the time of Sir Walter Raleigh it has been a prevalent idea that this portion of the American continent is the seat of mines of the precious metals to an inexhaustible extent.

Mining Correspondence.

[The Commissioners of Inland Revenue having notified to us their resolve to charge with advertisement duty all reports having the agents' names affixed, we appealed to them in a memorial, setting forth that we, or the respective companies, derived no advantage therefrom—the only object sought, or obtained, being that of affording to the mine adventurer and public the greatest guarantee we could for the truthful and *bonâ fide* nature of the statements periodically set forth, by authenticating them, and thus fixing a responsibility on the writer. The Commissioners have replied, that "the reports, with names attached, are advertisements, and that duty will be charged thereon." We have no alternative but submitting to their dictum. How far the Commissioners are correct in the view they take, our readers can judge as well as ourselves;—we can but hope that, on reflection, they will see the error into which they have fallen, and rescind the orders they have issued. All reports inserted under this head, however, may, as heretofore, be considered as furnished by the regular agents of the company; and we shall carefully guard against the publication of statements which cannot be relied on as correct.]

BRITISH MINES.

ASHBURTON UNITED.—We are driving east and west in the 55 fm. level, on the north lode, through productive ground. We are paying 5*l.* per fm. for driving east, where the lode is 16 in. wide, and 3*l.* per fm. for driving west, where the lode is 2 ft. wide, and producing 2 cwts. of tin to the ton of stuff; there are 3 pitches working in the back of this level, which may produce from 30 cwts. to 2 tons of tin per month. In the 45 fm. level, on the same lode, we have 6 pitches set, which are producing about 3 tons of tin per month. In driving the 35 fm. level west, on the same lode, at 1*l.* 10*s.* per fm. the lode is found intersected by several branches of copper, having a reverse underlay; they are composed of black and grey ore to the extent of 19 in. wide. It is early to report monthly returns of copper from this new discovery, but we are raising and dressing very promising stuff, the assays of which are 15¼, 11¼, and 4¼. On the middle north lode we are driving the 14 fm. level, at Parry's, at 1*l.* per fm.; the lode is subject to fluors, and the returns of tin, consequently, uncertain; there are two pitches in this level. In the south lode there is nothing new since my last. In the Union lode we have set three pitches, which will produce 1 ton of tin per month. The present week will throw light on the new copper lode, in the 35 fm. level, and also on some adventure pitches for tin, when I purpose to report prospects again.

BARRISTOWN.—The lode in the adit end east, which looked well last week, is again cut off by a slide in the end; we are driving south-east, where the lode makes against the slide; it looks regular, and produces about half a ton of lead per fm.; this is lengthening the ore ground in back of the adit level; in the bottom of the adit level, where we are stoping, we have at present a good lode, producing over three-quarters of a ton of lead per fm. In the back of the 16 fm. level the lode is large, but poor, thinly mixed with lead; the lode in the bottom of the 16 fm. level stoping is producing about 5 cwts. of lead per fm.; the lode in the winze, sinking under the 16 fm. level, is poor; we are driving west in the 16 fathom level; the lode is large and poor, with specks of ore only.

BEDFORD UNITED.—The shaftmen have been employed for the last fortnight in changing the bottom lift, &c., consequently not much progress has been made in sinking; all is now made complete, and they will resume sinking on Monday. The 103 fm. level has been extended 1 fm. 5 ft. 6 in.; there is no alteration in the ground, and the price for driving is the same as before—viz.: 8*l.* per fm. The 90 fm. level has been extended 1 fm. 4 ft. by the side of the lode, and the lode cut through to the north wall; we find it about 3½ ft. wide, and composed of spar, mundic, and yellow copper ore, to the extent of 2½ tons per fm. The 70 fm. level has been extended 1 fm. 4 ft. 1 in., and the lode cut through; it is about 4 ft. wide, and composed of spar, can, and black and yellow ore; altogether it presents a much more favourable appearance than for a long time past, and there is every prospect of its continuing to improve. Burley's winze has been sunk 2 fms.; the lode in the western end, and for nearly the length of the winze, is about 2 ft. wide, composed of black and yellow copper ore; in the eastern end the lode is 3½ ft. wide, and of the same character as for the last 8 fms. sinking. Burley's winze has been sunk 3 fms. 5 ft. 6 in.; the lode is, on an average, 2 ft. wide, and composed of black and yellow ore, mixed with mundic; a very considerable improvement has taken place in the lode during the month, and its present appearance warrants the expectation that the ore will make much further westward than in the levels above; the ground about the lode is very congenial for ore. The ores sampled on the 22d May make a produce of 13¼.

DEVON AND COURTENAY.—The end driving west, in the 40 fm. level, continues large, and strongly impregnated with white iron, mundic, some stones and branches of rich gossan and black ore; the ground continues favourable for driving. In the 80 fm. level, driving west on the south lode, the lode is 2½ ft. wide, carrying a leader of ore 3 in. wide; the other part of the lode is composed of capel and spar; the stope in this level is producing about one ton of ore per fathom.

DYFNGWM LEAD MINES.—We have been furnished by a correspondent with the following report from Capt. Wm. Verran, under date the 29th of May.—Having carefully surveyed these mines, I beg to present to you my report, in accordance with your request. The limits of the sett are about 650 fms. east and west, on the run of the lode, and 300 fms north and south. Three lodes have been proved, the Dyfngwm, Delife, and the Esgairgaled, running nearly the length of the sett, which have produced large quantities of lead from surface to the present bottoms. An adit has been driven north, about 130 fms., and intersected the Dyfngwm lode, from which several hundreds of tons of ore have been raised above and below adit. The adit takes this lode 45 fms. from surface, and when the Delife lode, which is 50 fms. north, is intersected, the adit will be at 55 to 60 fms., the Esgairgaled being about 5 fms. north. The Dyfngwm lode is worked under adit to the 22 fm. level, by a water-wheel 40 ft. in diameter, 3 ft. in breast, drawing a 10-inch lift 16 fms., and a 6-inch lift is fixed into a winze 26 ft. west of the downright shaft, and worked by means of a set-off drawing the water from the 22 fm. level; the water in the mine is from two to three strokes per minute, and the engine-power is from seven to eight. There is also connected a crushing-machine, which is of sufficient power to do all that is requisite in this part of the mine, and to sink the engine-shaft 60 fathoms below the present adit; the engine-shaft is set to six men at 5*l.* per fm., to rise from the back of the 22 fathom level to the 16 fathom level, and, when the shaft is holed, it is intended to fix the 10-inch lift at the 22 fathom level as a plunger, and sink below the 22 fathom level with an 8-inch lift; and on the course of the lode, by means of a set-off from the rod in the downright, the lode has but little underlay. After the shaft is holed, three stopes can be worked in the back of the 16 fm. level, at 4*l.* per fm., or 8*s.* in 1*l.* The 22 fm. level, east of the engine-shaft, is driven 33 fms.; the end is worth 15*l.* per fm.; about 8 fms. behind the end, the stope in the back is worth 30*l.* per fm., and two or three other stopes worth 15*l.* per fm. The 22 end west is driven 87 fms. 3 ft.; about 6 fms. from the shaft is Tudor's stopes, worth 30*l.* per fm.; a short distance from this the level is driven by the side of the lode for about 36 fms. in length, and it remains yet to be proved what lead is in this ground; 30 fms. from the shaft a winze is sunk from the adit, and holed to the 22 fm. level, and it is intended to shoot through the attle and old workings from surface to adit 45 fms., and make this a whim-shaft on the course of the lode to the bottom of the 22 fm. level, which will ventilate the west part of the mine 67 fms. from surface. The present end is only 27 fms. 3 ft. west of this shaft, and the end is worth 40*l.* per fm.; the lead only might be drawn at this shaft, and be dressed there; the shaft might be sunk 30 or 40 fms. deeper, and nearly as fast as the sump. About 100 fms. west of engine-shaft is the Carvatha level, which has been driven north, and cut through a lode, intermixed with a soft flookan, or slide, driven east on the soft part 50 fms. 3 ft., and cross-cutting south about 2 fms., and found the lode from 3 to 4 ft. wide, with good stones of lead in the end; I would recommend this level to be continued, being 10 fms. deeper than the tram-road level, extended west of the cross-cut 25 fms. in slidy ground; in my opinion, the Esgairgaled lode is still north; I judge from the 2 fm. cross-cut, which is driven north, and the water coming therefrom. About 300 fathoms west of the Carvatha adit are to be seen, in the face of the mountain called the Castle, two lodes, for 50 fathoms high, 30 fathoms of which is ore ground; it is very probable that the remaining 20 fathoms may be also productive, which cannot exactly be ascertained, in consequence of its being covered with earth and peat. The north lode is from 4 to 5 ft. in width, composed of quartz, and intermixed with lead throughout; the south lode is from 3 to 4 ft. wide, precisely of the same character as the above—the former is the Esgairgaled lode, and the latter is the Delife, separated at this point by a horse of killas and grey elvan, of 6 ft. thick. To work the two lodes effectually, I would open, cut, or quarry between the two, and break the lodes down together when most convenient, with as many men as can be put to work to an advantage, and stope downwards to the level of the river, unless the horse gets wider; if so, I would drive on the lodes at the level of the water, and stope the backs. Twelve men can be put to work at once, and after the stopes are lengthened, a greater number of men can be employed monthly; and there is no doubt on my mind but every man, on an average, will break one ton of lead per month, or more, and, after paying all expenses, give a profit of 5*l.* per month each man to the shareholders. No machinery will be required to work this part of the mine for many years, except a crushing machine, and stamps connected to the same; but at a future period, should it be necessary, to sink under the bed of the river or adit level, a rod can be attached to the crank of the same wheel, and having sufficient top power of water at all seasons of the year, this part can be sunk to any depth required. The Delife Mines, which are immediately adjoining east, on the same lodes, are leaving a profit of 7000*l.* per annum to the shareholders; they have now broke underground and at surface 800 tons of lead and copper ore. Having described the several workings of the mine, and its present state, as also its local position with regard to its productive neighbour on the east, the Delife Mine, the lodes of which pass through the sett, it is unnecessary for me to add more than the opinion I have formed from a careful survey, and having taken into consideration its various bearings, which I beg to submit. The nature and run of the lodes in the two setts appear to me to be identical, while the appearance at surface, as also the products underground, justify me in arriving at the conclusion that large returns will be made at an easy cost. I need hardly add, that perseverance, with economy, are the two main points which, if properly carried out, will, I have no doubt, make the Dyfngwm sett a lasting and profitable mine.

EAST CROWNDALE.—We have not as yet cut the lode in the 28 fathom level from Diamond's shaft; I am of opinion that it has been thrown a small distance further to the south than we expected to find it, by the large elvan course which about this place intersects the lode. The 17 fm. level, east from Diamond's shaft, continues poor, but I am glad to state that the ground is much changed for the better, consequently this end will be much sooner holed to the adit level. The adit level west, on the course of Thomas's lode, is poor, being extended into the same run, or channel of ground, as that now driving on in the 17 fm. level, east from Diamond's shaft. Tippett's stope, in the back of this level, is looking much the same as when last reported upon; the part of the lode we are carrying is 9 ft. wide, composed of peach, prian, killas, spar, mundic, and tin, worth about 25*l.* per fm. Paul's stope, to the east, is improving in appearance, and will soon be extended into a much richer piece of ground; it is at present worth 35*l.* per fm. Our engine, pit work, and stamps are all in good working condition.

EAST TAMAR CONSOLS.—Since my last report, we have no alteration of importance in the shaft, or any of the ends, with the exception of the 11 fathom level, north of Charlotte's shaft, where the lode has again become productive and promising. The pitches generally are looking well, and yielding quite as much ore. At Church-lane shaft, the water has gone down about 8 ft., and we hope to resume working in the 26 fm. level in a few days. The last parcel of ore, computed at 68 tons, weighed 68 tons 7¼ cwts., and was shipped on Friday last. Our next parcel will be sampled on the 16th, and we hope to make it above 70 tons.

HEIGNSTON DOWN CONSOLS.—Bailey's engine-shaft is congenial for mineral, but no lode being taken down since the commencement of the present sinking, cannot report thereon. The lode in the 35 fm. level, east of shaft, is still very large, but unproductive. The lode in Hitchens's shaft is increased in size since last report, being at present 2 ft. wide, with indications of further improvement.

HOLMBUSH.—The lode in the 132 fathom level, west of Diagonal shaft, is 12 inches wide, composed of spar, mundic, and stones of copper ore. The ground in the 120 fm. level south (east of Hitchins's shaft) is more favourable as we approach the lode. The lode in the 120 fm. level south is 4 ft. wide, composed of quartz and stones of lead—saving work. The lode in the 110 fm. level south is 3 feet wide, composed of soft quartz, prian, and about 6 cwts. of lead per fathom. The same remarks will apply to the pitch in the back of the level which is set together with the end. Since our last report we have taken down the flap-jack lode in the 100 fathom level, east of the great cross-course, and find it to be quite 2 ft. wide, and will produce from 3 to 4 tons of copper ore per fathom. We have now extended the level 4 fms. 6 in. on its course, and its being so regular, strong, and promising, we have commenced driving a cross-cut in the 120 fathom level south, and east of the great cross-course, close by it, to intersect it at this level. We first thought of driving the 110 fm. level east; but after considering the great advantages derivable at the 120 that could not be had at the 100, we have determined as above stated. First, we shall be able to intersect it in so short a time, and for a less sum of money; secondly, it will save more than 100 fms. of it running the stuff, which we could not possibly bring away at the 110, in addition to the present quantity we now have; thirdly, it will be opening 20 fathoms of ground in height and length, instead of 10 fms., by our cross-cut; and, fourthly, it being near Hitchins's shaft, it will act as a ventilator (or chimney) to that part of the mine, and save the expense of a new shaft. I think the above advantages will answer for themselves, and justify us in the conclusion we have come to.

KIRKCUDBRIGHTSHIRE.—The lode in the 62 fm. level, east and west of the shaft, is 5 ft. wide, a very kindly spar, and small branches of lead ore, yielding 5 cwts. to the fm. The lode in the 50 end east is 3 ft. wide, with a branch of lead yielding 4 cwts. to the fm. The lode in the 50 end west is 2 ft. wide, yielding 7 cwts. of lead to the fm., a very kindly lode. The lode in the 40 end west is in a hard knot of ground, and still unproductive. We have the lode in the cross-cut in the 40 east, and have set to sink on it; it is about 2 ft. wide, and contains small strings of jack and lead mixed with killas. We have shipped another cargo of lead this week for the Holywell market.

LAMHEROOE.—The lode in the engine-shaft appears very large; but we shall not be able to ascertain its size for some two or more fms. deeper. I will forward you some specimens in the course of a fortnight, as I have no doubt but by that time we shall see something more of it; and I hope by next Monday our men will be in a better position for sinking, as I intend dropping the lift by Saturday, and get the water in fork by Monday, and to be able to report on Saturday week of our shaft going on favourably. We have had a torrent of water to encounter. In Davey's shaft we met with a flat branch of spar, which checked our sinking; having got through it, the ground is more favourable, and the shaft is sunk 4 fms. below the 40 fm. level.

MENDIP HILLS.—No particular alteration has taken place in any part of the property since my last report; the beds of slag stuff in Charterhouse Valley continue about 16 ft. thick, producing some good quality slags; we have a tolerable good pile again prepared for the furnaces. In Blackmoor and Ubley we are progressing favourably with the dressing floors, and hope to see the whole of the washing strakes and boxes fixed in their places by Wednesday; the masons are still engaged in dividing and plastering the old workshops.

SOUTH DOLCOATH.—The engine-shaft is now down to the 60 fm. level, the lode in which is 3½ ft. wide, with spots of ore. In the 50 fm. level west the lode is 4 ft. wide, kindly, but poor. In the 40 fm. level east the lode is 3 ft. wide, with occasional stones of ore.

SOUTH TAMAR CONSOLS.—The shaft is progressing favourably, and will be completed to the 101 fm. level in the course of two or three days. The lode in the south end, in the 90 fm. level, is rather larger, very kindly, and producing more ore. In the 80 fm. level south the grey part of the lode is small, but yielding very good work, and is easy for driving. In the winze sinking in the 70 fm. level the lode is improving both in size and quantity. The lode in the east in the 30 fm. level is larger, and yielding very rich work for silver. There is no alteration in any other part of the mine.

SOUTH WHEAL TRELAWNY.—The engine-shaft is still sinking with 9 men, ground not so favourable as when last mentioned: the spary branch with some other strings and branches have formed a junction, making a lode 2½ ft. wide, underlaying east about 2 ft. in a fm., composed of spar, mundic, killas, prian, flookan, and spots of lead.

TAMAR SILVER-LEAD.—The engine-shaft is sunk 2 fms. 4 ft. below the 190 fm. level, the ground is very hard for sinking. At the south end, in this level, the lode is 2 ft. wide, good stamps work. In the 175 end the lode is 6 in. wide, composed of spar and ore, saving work. In the 160 end the lode is 2½ ft. wide, work of good quality. In the 145 end the lode is 3½ ft. wide, yielding work of a promising character. We have recommenced driving the 135 end, the lode in which is disordered by a slide course. At North Tamar, in the 80 fm. level, the lode is still small composed of capel and mundic, with a small quantity of ore; in the 70 fm. level, driving north, the lode is 6 in. wide, good work; in the same level, driving south, the lode is 2½ ft. wide, and opening ground that will set at a moderate tribute. In our tribute department and prospects generally we are looking favourable. We sampled on Saturday, the 24 inst, computed 92 tons of rich silver-lead-ores, samples of which have been sent to the different smelters.

TINCROFT.—The lode in Palmer's shaft, sinking below the 90 fm. level, is 2½ ft. wide, with good stones of copper ore. The lode in the 90 fm. level west is 2 ft. wide, with some ore, but not to value. In the 80 fm. level west the lode is worth 8*l.* per fm. for copper. In the 24 fm. level, driving west towards Stainsby's shaft, the lode is worth 40*l.* per fathom for copper; the latter shaft is now down to the 24 fm. level, and we have commenced to cut a plat, &c. At North Tincroft we have begun to sink the engine-shaft below the 100 fm. level. In the 100 fm. level east the lode is 4 ft. wide, worth 14*l.* per fathom for copper; in the 100 fm. level west the lode is worth 13*l.* per fathom for copper. In the 90 fm. level, east of Willoughby's shaft, the lode is 2 ft. wide, worth 7*l.* per fm.; in the 90 fm. level west the lode is 4 ft. wide, worth 14*l.* per fathom for copper. In the 80 fm. level, east of Willoughby's shaft, the lode is worth 8*l.* per fm. for copper. On Highburrow lode, in the 152 fm. level, east of engine-shaft, the lode is worth 9*l.* per fm. for tin. In the 142 fm. level, east of Martin's east shaft, the lode is worth 9*l.* per fm. for tin; the stopes in the back of this level, east and west of the shaft, are worth 15*l.* per fathom for tin. In the 132 fm. level, east of Martin's east shaft, the lode is worth 16*l.* per fm. for tin; in the west end, same level, the lode is worth 14*l.* per fathom for tin; the stopes in the back of this level, east and west of the shaft, are worth 20*l.* per fm. for tin. In the 120 fm. level, east of engine-shaft, the lode is 3 ft. wide, worth 10*l.* per fathom for tin. Chapple's lode, in the 100 fm. level, west of Downright shaft, is worth 9*l.* per fm. for copper. In the 90 fm. level west the lode is worth 16*l.* per fm. for copper; in the winze, sinking below this level, the lode is worth 14*l.* per fm. for copper. In the 80 fm. level west the lode is worth 11*l.* per fm. for copper. At Chapple's shaft we have commenced to cut a plat in the 84 fm. level, the lode is worth 8*l.* per fm. for copper. We are still cutting down Wheal Providence engine-shaft on Wheal Druid lode, and shall complete the same in about a fortnight.

TRELEIGH CONSOLS.—Garden's shaft, below the 113, is sinking in the country, ground improved and more promising for copper. In the 90, west of ditto, lode 20 in. wide, worth 3*l.* per fm. Parent's engine-shaft, below the 20, is sinking in the country. In the 20, west of ditto, lode 18 in. wide, with stones of ore, and is looking kindly. The 20 cross-cut south is driving in the country. At Parent's whim-shaft, below the adit, lode 3 ft. wide, with stones of ore, and is looking kindly. In the winze below the adit, on middle lode, lode 20 in. wide, worth 4*l.* per fm. The piece of ground from the 70 to the 80 is holed with the borer, and will require next week to complete.

WEST WHEAL JEWEL.—The rise in the back of the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode worth 5*l.* per fm.—rose last month 1 fm. 3 ft. The winze in the bottom of the 57 fm. level, west of Williams's cross-course, on the same lode, lode worth 6*l.* per fm.—sunk last month 2 fms. 2 ft. In the 47 fm. level, west of ditto, lode worth 3*l.* per fm.—drove last month 2 fms. In the deep adit, west of ditto, lode producing stones of ore drove last month 2 fms. 1 ft. In the cross-cut in the deep adit, under Tregonning's shaft, we drove last month 2 fms. Tregonning's shaft, sinking below the 12 fm. level, sunk last month 1 fm. 2 ft. The 57 cross-cut, north from Buckingham's lode, drove last month 5 fms. The stopes in the back of the 12 fm. level, west of Pryor's winze, on Tolcarne tin lode, lode worth 14*l.* per fm. The stopes in the back of this level, east of Pryor's winze, worth 10*l.* per fm. The stopes in the bottom of the 12 fm. level, east of Tregonning's shaft, worth 13*l.* per fm. The stopes in the bottom of this level, east of Tregonning's winze, worth 14*l.* per fathom—these stopes are working on tribute.

WHEAL BENNY.—This morning we cut into the lode in the 30 fm. level. In Ford's shaft the water has increased; the lode is changed for the better, and looking far more promising for copper; in the south cross-cut the lode is increasing in size going eastward, with a soft decomposed killas, or flookan, to the north and south.

WHEAL MARY ANN.—The lode in the 50 fm. level, south of Barratt's shaft, is 4 ft. wide, and worth 10*l.* per fm.; the stopes in the back of this level are producing ¼ ton of lead ore per fm. The lode in the 40 fm. level, south of the shaft, is 2 ft. wide, and worth 6*l.* per fm.; the stopes in the back of this level are producing a fair quantity of lead. At Pollard's shaft, the 50 fm. level cross-cut is driven west 2½ fms., and we are daily expecting to cut the lode. The lode in the 40 fm. level, north of this shaft, is 2 ft. wide, and worth 12*l.* per fm.; the stopes in the back of this level are looking very well, producing 15 cwts. of lead per fm.; in the same level south the lode is 2½ ft. wide, and worth 5*l.* per fm.; the lode in the rise, in the back of this level, is 15 in. wide, composed of can and lead. The lode in the 30 fm. level south is still in branches, producing some very good ore; the stopes in the back of this level are producing a fair quantity of lead.; the lode in the rise, in the back of this level, is 2 ft. wide, composed of can and lead. The parcel of ores, computed 70 tons, was sold, on the 25th May, to Messrs. Pontifex and Wood, at 19*l.* 10*s.* per ton.

WHEAL TRELAWNY.—Phillips's shaft having been sunk to the 82 fm. level, we have commenced driving east at that level, to intersect the lode. The lode in the 72, north of this shaft, is 2½ ft. wide, and worth 8*l.* per fm.; in the same level south the lode is 2 ft. wide, and worth 14*l.* per fm.; the stopes in the back of this level are producing a fair quantity of ore. The lode in the 62 fm. level north is 6 ft. wide, and worth 25*l.* per fm.; all the stopes in the back of this level are yielding a fair quantity of ore. Trelawny's shaft is sunk 20 fms. under the 52 fm. level; the ground continues as was last reported. The lode in the 52, north of this shaft, is 3 ft. wide, and worth 8*l.* per fm.; all the stopes in the back of this level are producing a fair quantity of ore. The stopes in the back of the 42, north of this shaft, continues to produce a fair quantity of ore. At the north mine, the lode in the 55, north of Trehane boundary, is as was last reported. The lode in the 45, north of ditto, is 1½ ft. wide, and worth 5*l.* per fm. The lode in the 40, south of Smith's shaft, is 3 ft. wide, and worth 8*l.* per fm.; in the same level north the lode is 1½ ft. wide, and worth 4*l.* per fm. The lode in the 30 north is as last reported.

WHEAL VINCENT.—We have a great improvement in the winze sinking on the north lode; it is 2 feet wide, of splendid work, and we are opening good stopes—in fact, if it continues as at present a few fathoms deeper, we shall be enabled to employ sufficient hands stoping both east and west, to make regular returns. The work we are now stamping from this lode is worth upwards of 7 cwts. of tin to 100 sacks. We have also an improvement on the south lode; the tributers yesterday broke 2 cwts. of tin, or better, and it still continues very rich. We expect to cut this lode further west in a few days. The tributers have a good pile of tin at surface ready for stamps; but, in consequence of the stamps being fully engaged stamping the owners' work, we are obliged to leave it as it is. I am happy to state that we shall be obliged to erect more stamps immediately. Our engine-shaft is going down satisfactorily; no material alteration since last report. On the whole, our mine presents a very flattering appearance, and bids fair to become a very profitable investment.

WHIDDEN.—The shallow adit cross-cut is still in a dark channel of ground, intersected by branches of mundic, underlaying north, and the end unusually wet; the lode we expect to cut underlays south towards the end.

FOREIGN MINES.

ALTEN MINES.—The following is the estimated produce for April:—

Mines.	Tons of Ore.	Per Cent.	Fine Copper.
Raipas	48	6½	3·12
Old Mine	58	6½	3·73
United Mines	25	6	1·50
Michell's	10	7	0·70
Carl Johan's	5½	14	0·77
Ryper's	11	8	0·10
Mancur's	1½	6	0·09
Total	149½		10·01

Mining Report from the 28th April to the 24th May.

Raipas.—The following is a report of the appearance of the several workings now in progress:—In the stope, west of Monk's shaft, in the 20 fm. workings, the lode still continues to increase in size; it is now nearly 11 ft. big, and upwards of 4 fms. in length, and orey throughout, though of rather a dredgy nature; the ground, however, has somewhat improved within the past week, owing, in a great measure, to a large portion of flint hitherto found in this bargain having been replaced by a beautiful soft limestone, which has always been found to contain some of our richest ores at Raipas—it is producing about 7 tons of ore per fathom. In the 20 northern cross-cut the lode in the centre of the level is about 3 feet, whilst in the roof it is upwards of 4 ft. in size, and contains purple and yellow ores, running after a smooth wall in a north-east direction, and wearing a very kindly appearance, it is also leaving some good reserves in the roof. Above the 20 fm. workings the roof stope is about 4 ft. in size, and chiefly composed of slate, containing purple and yellow ores—it produces about 4 tons of ore per fm. In the winze, in the 20 fm. workings, the lode at present is rather small, but contains ore of a good quality; the ground is also very hard, which greatly impedes the progress we should otherwise have made before the close of the month. The other parts of the mine continue the same as last reported. The weather at Raipas has been very severe for the last two days, and we have had a fall of snow nearly 4 ft. deep all over the mine; in some places even more than what is here asserted, which is really disheartening.

United Mines.—The workings on Ward's lode have latterly been subject to more than usual fluctuations, in consequence of which one of the pitches has been suspended, and others still continue productive. Another part of the same lode, on which four men are employed, yields a small quantity of good ore, and on the whole is very promising. The prospects of the new sink are satisfactory and equally productive. At Woodfall's, the workings on the backs are suspended, in consequence of the thaw and loose ground; but the tributers are making fair returns of ore from other parts of the mine. The produce of this mine has experienced a considerable falling off; but we have every reason to anticipate an increase, and the present small returns are even more profitable than formerly, on account of the reduced expenditure.

Old Mine.—The tribute operations continue to yield a favourable result, and the prospects are equally flattering. The new sink is the most productive, as well as most promising, working on this part of the establishment. A very heavy fall of snow has been a great impediment to our returning the ore to the smelting-house, but we have no reason to anticipate any falling off.

Ryper's.—A great influx of water has latterly obliged us to suspend the workings on the new lode, but the tributers are employed on a recent discovery, which holds out very flattering prospects; at present the lode is small, but composed almost of solid prills.

Mancur's.—We have opened a large coarse lode by the side of the old shaft, which produces a small quantity of ore; it is very promising at present, but will not materially add to the returns.

Michell's is still satisfactory, and the prospects have undergone no change. The tributers return a small quantity of good ore from Nellen's lode, and the produce has not deteriorated.

Carl Johan's.—No change is to be noted since my last report. We have every reason to feel satisfied with the result of our operations; whilst the prospects are still very cheering.

The falling off in the April produce may, in a great measure, and particularly at Raipas, be attributed to the Easter holidays, during which nearly a week expires with little or no work being performed.

COPIAPO MINES.—The following is the mine report for February:—

Checo Copper Mine.—The winze sinking below the 12 fm. level, near the new shaft, where we have had a good bunch of ore for the last two or three months, became suddenly poor—the effect of a slide passing through the lode, dislocating and splitting it into branches; but it is now resuming a more compact form, and the ore becoming contracted, the vein is still large, and the rich part of it about 1½ ft. wide, which presents great promise of a speedy improvement. In the 20 fm. level, east of Harman's shaft, we have cut into the north wall, where the lode appeared to be heaved, and have discovered a good branch of ore 10 in. wide, with every indication of its leading to a good bunch of ore, and with an extensive piece of new ground before us; the lode in the end, driving west of the Victoria shaft, has a beautiful appearance, but we have not as yet met with any regular branch of ore, only occasional stones, but they are of excellent quality. The stopes in the back of the 12 fm. level are still yielding some good ore, but the quantity is not large; all the other parts are without any alteration of importance.

Esperanza Copper Mine.—I have suspended this mine for the present, and employed the people in the silver and gold mines, where I think there are greater chances of finding something to remunerate for the outlay.

San Pedro Copper Mine.—We have four English miners employed in this mine working on the stopes, the levels being poor at present; and I cannot obtain any native barreteros to drive them without paying what I considered a very unreasonable price. The ground in the back of the 10 fm. level has yielded well in the last month; the ore is very rich, but the vein at present is only 10 in. wide, and very hard; three men have broken out 17 tons that will yield 35 per cent. The other has been stoping in the back of the 5 fm. level, where the lode is large, with numerous small veins of rich ore scattered through it; this will pay well for working, and by working and jigging it, we bring the ore to a good quality. Produce for Feb.—Checo, 31 tons; San Pedro, 20 tons=51 tons.

The *Balgownie*, with 450 tons of copper ore, would sail from Copiapo in a few days.

Silver Mines.—*Al Fin Hallada.*—In my last I informed you that we had broken down about 3½ varas of the lode in this mine, in chiflon No. 3, that would, I thought, yield about 3000 marcs of silver, worth about 6000*l.* We have prepared and amalgamated about 8 tons out of the 9½, that have produced 2300 marcs of silver. Since then we have desued about 9 varas, and the vein looks beautiful; we shall commence breaking it down about the 4th proximo, and I am in great hopes that it will turn out as good as the last—if so, we may expect 6000 marcs of silver. We have about 10 varas desued in No. 4 chiflon, that also looks pretty, and we are expecting that it will turn out some good ore—say, 150 marcs per cajon (3 tons). No. 1 is poor at present; but in chiflon No. 2 we have a beautiful vein, exhibiting some good spots of silver, from which we are led to entertain very sanguine hopes of nearing a rich bunch of ore. I expect, in my next, to report a larger produce from this mine.

San Jose del Carmen.—We have only one end, called the adit level, good at present; the lode has been disordered by a slide; but appears now to be resuming its former character; and we are all expecting a large bunch of rich ore daily. The produce has been about 10 tons this month, but cannot give my opinion of the quality, as, from my absence at Santiago, I have not seen any of the ore. We are sinking a new perpendicular shaft, and hope to cut the lode in it shortly at a depth of about 20 varas—this being deep enough to draw with a windlass. I intend now to look out for a proper place, and commence the sinking of a new whim shaft in this mine, and also in the Al Fin Hallada. We have in these two mines 60 tons of ore prepared for carrying to the amalgamation establishments, as soon as troops can be had for the purpose, which I hope will be in the course of a few days. I cannot report the produce in regular form in these mines, until we have sufficient hands to prepare the ores, in our accustomed way, as they are extracted; but I will, after the lodes are broken down, give you the estimate as near as I can.

Mercedites.—The captain informs me, that they have seven varas of lode desued in our shaft that looks pretty, and that he thinks it will produce some very rich ore; this will also be broken down in a few days. The lodes in Carmen Alto, Plomizo, Colorada, and Loreto Mines, have not been broken down for the month—all of which will be taken down in the next 15 or 20 days, or at least I hope so; and I am very confident of having some good news to communicate in my next.

Gold Mines.—*Loquenda Esperanza.*—Part of the lode has been broken down, and I am informed by the captain that it has produced about two tons of good ore. This I hope to have returned before my next; and the vein is reported to be looking beautiful.

Chacabuco.—A part of the lode has also been broken down here, and produced some good ore; about a ton of this I will have returned also, and report the result in my next. I hope to remit you, by the following packet, 2d May, 2060 ucs. ($16,080*l.*) of silver, and a few—say, 6 or 8—pounds of gold, if I can bring down the ore in time to be amalgamated.

GUADALCANAL SILVER MINES.—The following is an extract of the captain's letter, dated 25th May:—"We had not, as I anticipated, on Friday last dropped to the bottom of the diagonal shaft, but, by dropping another 9-feet pump (by-the-bye, the last we had on the mine not in use), we were enabled to fork the water, and leave the 52 fm. level dry, which, I am happy to inform you, was done with much less trouble than might be expected in such an old mine. We have not yet been able to get in any great distance in these levels, as they are to the very back filled with mud; but with the coming water to bring it in solution, we shall soon draw it away with the engine; being occupied about this, we have done nothing in the 43 fm. level. We have driven in the past week

about 2 fms. on the course of the lode. In the 21 fm. level the lode is somewhat improved, but until some assays have been made from the end, I cannot attempt to report its worth. We have drawn some good work this day; the productive part of the lode varies from 1 ft. to 15 in. wide."—We understand that, since this letter was received, there are advices in town of an important discovery in the 51 fm. level.

NATIONAL BRAZILIAN MINES.—*Cocaes, March* 22.—Hartley's eastern

shoot is now, and has been for some time, the most interesting part of the mine, and the samples obtained from there within the last month are of a very promising character; large stones of compact lacotings have sometimes been selected from the lower layers of the Cavaco veins, with beautiful veins of gold running completely through them; and as the appearance of the lode is much the same as it has been for some time past, we entertain great hopes of the veins opening as we approach the Bandeira line of ground; this stope is now from the Cavaco shaft 36 fms., bearing south 72° east; it will, therefore, be seen, by reference to the plan, that 14 fms. only remain to be got through before the result will be known, as to whether the Cavaco and the Bandeira veins will come in contact at the point previously alluded to—that is, at 24 fms. east of the cross-cut No. 2. The eastern end, towards Irving's, is also a very interesting point, as the floor of ground alluded to in last report has been laid open sufficiently to select a sample from it, which indicates very favourably, and, in the course of a few days, we shall be enabled to give you more information respecting it.

Cocaes produce from 18th to 24th March	*Mks.*	5	5	5	6		
Cuiaba ,, 16th to 24th ditto		3	2	1	10	8	7 4 71

ST. JOHN DEL REY MINES.—*Morro Velho, March* 9.

Water.—This department, as you justly observe, must always be a source of great anxiety at Morro Velho; but we have great reason to be satisfied with the measures of precaution we continued to adopt throughout the last year, especially with the Chrystaes rego, the most dangerous and by far the most important of all our water courses, seeing that it triumphantly braved all the fury of the unprecedented storm of the 4th inst.

Gold extracted to date—7377 oitavas, from 470·84 cubic ft. of sand (being the result of 11 days' stamping)=15·6 oits. per cubic foot. This is better rather than I had ventured to hope, after our disasters at the beginning of the month.

Stamps working 17 days, 90·46 heads.

Supply of Stone.—This continues to be greatly interfered with by the sickly state of the establishment.

March 29.—*Gold extracted to date*—14,584 oits., from 935·52 cubic feet of sand (resulting from 21 days' stamping)=15·63 oits. per cubic foot.

Stamps working 28 days, 91·42 heads.

Supply of Stone.—This is somewhat more abundant, owing to the exertions we are making by working overtime in the mine, as well as in the spalling floor, to provide a sufficient supply to carry us over the Easter holidays; but, with all our exertions, we cannot arrive at rejecting a single stone.

Water.—The whole of the Chrystaes water incoming on the mine is estimated at 1209 cubic feet per minute; of this only 509 cubic feet, passing through the iron pipes, came on at the horizon of the Cachoeira hauling machine, the remaining 700 cubic feet, conveyed by launders, came on 76 feet lower. Having had a good deal of conversation lately with Capt. Treloar, as to our future requirements of water, he so strongly recommended bringing on the whole of the Chrystaes water at the horizon of the Cachoeira hauling machine, by means of an additional set of iron pipes, as the only mode of supplying the yearly increasing wants of our machinery, that I requested him to put down his ideas thereon, in the shape of a report to me; this I now hand you, together with a plan of the distribution of our supplies of water, first, as they now exist, and, second, as they will be after the proposed alteration. In all his views and statements thereon I fully coincide, with one exception—namely, as to the expense of the iron pipes laid down at Morro Velho, and which I am of opinion will be nearer 1500*l.* than 1000*l.*; but I am also of opinion, that no consideration of expense ought to prevent our securing the immense additional powers to be derived from the command of this great body of water at the high elevation now proposed; and, therefore, if the board, on full consideration of the statements now submitted to them, concur in opinion with Capt. Treloar and myself, I have only to add the following requisition for 550 feet of wrought-iron pipes, 14½ in. diameter, the thickness to be determined in England, and arranged according to the pressure, as shown in an accompanying sketch. The thickness of the 12½-in. pipes now in use is 5-16ths to 4-16ths of an inch, as shown. The whole to be fitted together with flanches in England, before dispatching them to Brazil. No one piece to exceed, or to be much less than 160 lbs., on account of the carriage up the country; and no trouble to be taken about the angles, as the bevil rings for this purpose, as well as the tube, can be managed best here. In all other respects, I refer you, in case of doubt, to the detailed instructions transmitted to the Perran Foundry with the previous requisition for iron pipes.

ST. JOHN DEL REY MINING COMPANY.

The annual general meeting of shareholders in this company was held at the offices, Tokenhouse-yard, on Friday last (yesterday).

J. D. Powles, Esq., in the chair.

Mr. Routh (the secretary) having read the notice convening the meeting, the Chairman read the following directors' report:—

The directors on the 1st December last, declared a half-yearly dividend, being the 13th, at the rate of 17s. 6d. per share, payable on the 9th of the same month.

The monthly produce of gold at Morro Velho, from the 1st March, 1848, to 28th Feb., 1849, has been as follows:—1848, March, 17,714 oitavas; April, 16,059; May, 16,899; June, 14,267; July, 17,979; August, 19,864; September, 19,773; October, 20,657; Nov., 23,407; December, 22,208; 1849, January, 21,826; February, 19,483—making total oitavas, 236,136. The produce of the 12 months, ending February, 1848, was 175,439 oitavas. The nett profit on the working the mines for the year ending 28th February last, has been 33,333*l.* 8s. 3d. The number of tons of ore raised in the year ending 31st December last, was 61,672; the number of tons raised in 1847, was 40,859.

The extent of stoping ground laid open on the 31st December last, was 506·93 square fathoms—viz.: Bahu Mine, 176·93; East Quebra Panella, 31·66; West Quebra Panella, 18·64; Gamba Mine, 75·; Cachoeira Mine, 204·16—making a total of 506·39 square fms. At the end of 1847, it was 463·21 fathoms.

The amount of profit made from 29th February, 1848, to 28th February, 1849, having been carried to the credit of the profit and loss account, leaves that account in credit, after paying the half-yearly dividend due the 9th December last, and transferring to the reserved fund, as hereinafter mentioned, the sum of 10,000*l.*, 24,166*l.* 8s. 3d.; out of which the directors have declared a half-yearly dividend (clear of income tax) of 20s. per share=13,750*l.*—leaving at the credit of profit and loss, 10,416*l.* 8s. 3d.

From the foregoing statement it will be observed that the course of the company's proceedings, during the past year, has been one of continued success. There has been an abundant supply of ore of satisfactory quality, arising from the working the ground opened out by the labours of former years, while the further opening out of mineral ground has been steadily prosecuted, there being at the end of 1848, 44 fathoms more of stoping ground available than at the end of 1847. The average number of borers at work during the year 1848, was 193—at the end of the year it was 210. Capt. Treloar remarks in his report that there is room in the mines for 310 borers—that is to say, that the extent of ground opened out would employ borers to the extent of nearly 50 per cent. more than the company has in its service. This fact shows that the supply of ore available is in advance of the amount of labour which the company has it in its power to employ—a fact important to be kept in mind, when it is considered that the quantity of ore stamped in 1848 was 58,122 tons, while in 1847 it was only 40,234 tons, and in 1846 34,935 tons; thus showing that, although there is an increase in the production in 1848 over that of 1847, of 44 per cent., and over 1846, of 66 per cent., it has been effected not only without any undue pressure on the mineral resources, but that the head mining captain complains that he is still inadequately supplied with labour for the extraction of the mineral at hand. The Bahu sump-shaft has been sunk 6 fathoms 2 feet. There is no appearance of any deterioration in the lode as it goes down. On the contrary, Capt. Treloar says, "the lode is not only maintaining its character, but it is even looking better." The new stamping mill of 36 heads, which in the last annual report it was announced was in progress, commenced work to the extent of one-half the number of heads in June last, and the other half in September last. The increase in the produce during the past year could not have been attained without the completion of this important addition to the reduction power of the establishment. The amalgamation house has been almost entirely rebuilt, and many other works carried forward during the past year, of which ample details are given in the reports from the heads of the several departments to the superintendent, and in his report. A great part of the year 1848 has been unhealthy at Morro Velho. The deaths among the negroes have amounted to 59 in 1106, being about 5¼ per cent.; while, in 1847, they were only 2 6-10ths per cent. Epidemic diseases have prevalled to an unusual extent, as will be seen by the medical report. By the last advices, however, there was a great improvement in the sanitary condition of the establishment. A new hospital has been completed at Morro Velho, provided with hot-baths, and every comfort for the sick. Regarding the negro population on the establishment, the superintendent states that they are orderly, well conducted, and contented. They are provided with every comfort suited to their condition in life. Their hours of labour are moderate; and whenever they work over-time they are paid for it. It will be seen by the account of disbursements, that the sum of 14677*l.* 19s. 2d. was in the past year paid to them for rewards and over-time. They punctually attend the parish church, and are treated in all respects with a consistent kindness and consideration. The directors have thought it right to advert to these facts, because they sometimes see in the public prints very erroneous statements in reference to the Negro population employed in mining in Brazil. They believe that in no part of the world can a body of working people be found in a state of greater comfort and contentedness, than the negroes at Morro Velho. It is a great injustice to make it an imputation on the English mining companies working in Brasil, that they employ negro labour. They do so because it is the labour of the country. Englishmen going into a foreign country to carry on their pursuits, must of necessity conform to the social condition which they find established in that country. To attempt violently and suddenly to uproot it, would be as presumptuous as it would be useless. The English mining companies have done substantial service to the interests of humanity in Brazil, by the improved treatment they have afforded to the negroes in their service. They are treated as fellow-men and fellow-Christians. Their rights are respected. If they work a single hour in the day beyond their appointed service, which is 8 hours out of 24, they are punctually paid for it. Rewards are given to them for good conduct. Their children are trained to useful handicraft. Matrimony is encouraged. The clergyman of the parish gives them religious instruction, besides that which they receive in church, and is paid by the company for so doing. Nothing is left undone that can be done for their good. Thus they are practically and substantially benefitted, without interfering with the policy of the State in which they are located, or creating an alarm on the part of its rulers, which could only tend to counteract the good which is now being done. The following is the financial position of the company:—

In England—Balance at the bankers'	£7,652	10	1
Newcastle and Carlisle Railway Debentures	5,000	0	0
Exchequer Bills	5,366	15	10
Gold expected per *Express* packet	14,422	2	6
Making	£32,341	8	5
To pay—Drafts running	£6,000		
Dividend now declared	13,750		
Appropriated to the reserved fund	10,000—29,750	0	0
Leaves	£ 2,591	8	5
In Brazil—Cash at Morro Velho	£ 2,231	10	6
Ditto in the hands of Messrs. W. Harrison & Co., being drafts sent to them for negotiation	5,072	19	1
Making	£ 7,304	9	7
To pay—Salaries and wages	2,609	9	9

With a view to establish and sustain a competent reserved fund in this concern, in conformity with the provision for that purpose, contained in the certificates of the shares, the directors have transferred from the account of profit and loss to the head of "Reserved Fund," the sum of 10,000*l.*; and they propose to appropriate out of all future dividends, 10 per cent. on the sum divided, to be invested in securities, and added to this fund.

The directors have only in conclusion to state, that they believe the undertaking to be in a sound and satisfactory position, and that they will endeavour to sustain it therein.

From the statement of receipts and expenditure from 7th June, 1848, to 31st May, 1849, it appeared that the balance of last account was 14,666*l.* 1s. 10d.; produce of five shipments of gold, 67,158*l.* 3s. 8d.; interest, 202*l.* 1s. 11d.; received on account of John Tyack, to be repaid, 600*l.*—82,621*l.* 7s. 5d.: from which deduct general expenses, 58,451*l.* 8s.; two dividends, 16,500*l.*—leaves balance in favour of the company, 7669*l.* 19s. 5d. The profit and loss account stand thus—

Twelfth dividend, payable 12th June, 1848	£6,875	0	0
Thirteenth ditto, payable 9th Dec., 1848	9,625	0	0
Income tax	391	0	2
General expenses	1,851	14	3
Transferred to the reserved fund	10,000	0	0
Balance	24,166	8	3
Total	£52,909	2	8
Balance of former account	£19,322	19	11
Balance of interest account	252	14	6
Morro Velho Estate mining account, for excess of receipts over expenditure, from 7th June, 1848; to 31st May, 1849	33,333	8	3
Total	£52,909	2	8

The Morro Velho account from 1st March, 1848, to 28th February, 1849, shows nett proceeds of gold, 81,666*l.* 18s. 8d.; expenses in Brazil, 48,333*l.* 9s. 9d.—leaving balance in favour of the company, 33,333*l.* 8s. 3d. A general abstract of the several agents' reports, and that of the superintendents, will be found in the *Mining Journal* of the 19th May last.

The Chairman expressed his regret that the accounts were signed only by one of the auditors, Mr. Schneider, his colleague, Mr. Vickers, in that board room, a few days since, was attacked with a fit of apoplexy; he was, of course, removed home immediately, but was at present totally unfit to be spoken to on business. That was all the directors had to bring before the meeting; but he should be most happy to answer any questions, or give any explanations.

Mr. Iago called attention to the reserve fund, to which, as stated in the accounts, 10,000*l.* had been appropriated from the profit and loss account; he considered it ought to come out of capital, and to effect this they might very easily add another 1000*l.*, and write 1*l.* per share off on the backs of the certificates, which would ease the proprietors of so much of future calls.

The Chairman explained the impracticability of such a scheme; their original capital was nearly expended in the cost of the Morro Velho estate. The directors were under heavy personal responsibilities, and without security, with the exception of the 5*l.* per share, which they had yet the power to call up, they had guaranteed the payment for the negro hire to the Cata Branca Company for 14 years—2500*l.* for the first six years, and after that 1500*l.* It was for the interests of the proprietors themselves to keep a good reserve, as something to fall back upon in case of accidents, changes in the mine, bad times, &c.

T. H. Bosworth, Esq., said, he had been many years connected with the company, and held a large stake in it; he had never taken up or perused a report which gave him greater pleasure than the one he held in his hand; it gave every satisfaction as to the present state of things, and the greatest encouragement for the future. He had been asked in the adjoining room if the dividends they were receiving were *bond fide* from the profits of the workings, or from some cooking-up of the accounts by the directors? He was, of course, much surprised at the question, and replied, that he believed there was no occasion for anything of the kind, as the undertaking was now progressing in unclouded sunshine. He was happy to say they had just the right sort, and the right number of cooks, and there was no fear that they would spoil the broth. He believed the directors to have feelings too honourable to deserve the shadow of such an insinuation, and he thought the proprietary were under the greatest obligation for their having brought the undertaking into so prosperous a state. He highly approved of the steps they had taken, in making a good beginning to a reserve fund; he thought a company of such magnitude should never be without a good rest to fall back upon; and if any blame did attach to them, it was because they had not commenced it earlier. He concluded, by moving the adoption of the report and accounts, which was seconded by J. Buckley, Esq., and carried unanimously.

The Chairman then read a resolution, presented by Mr. Iago founded on his previous observations, that the reserve fund should come out of capital; but on again explaining its impracticability it was not pressed.

A Proprietor said he trusted the directors would invest no more surplus funds in railway debentures, they were nearly all at a discount.

The Chairman said they where a good investment as to interest, were purchased after the same careful consideration as would be given to all future investments, and were perfectly safe.

On the motion for the re-election of J. D. Powles, Esq., as a director, who went out of office by rotation, Mr. Duval said, although he should heartily vote for Mr Powle's re-election, he wished to observe he did not do it from a conviction that the re-election of directors should always follow as a matter of course; sometimes an infusion of new blood was necessary. The motion was carried unanimously. Messrs. Schneider and Vickers were re-elected as auditors for the ensuing year, and the meeting broke up.

ANTIMONY AND SILVER-LEAD MINING COMPANY.

A special meeting of adventurers was held at the offices, Lombard-street, on Wednesday, the 6th inst.—W. G. Pearce, Esq., in the chair.—The notice convening the meeting having been read, the Purser read the balance-sheet, from which it appeared that the calls received amounted to 1070*l.*, expenditure 930*l.* 5s.—It was resolved, that a call of 2*l.* per share be made for the purpose of further prosecuting the mine.—The report of Mr. Richardson having been read, and also a letter from Mr. Oliver, of Birmingham, complaining of the meetings not taking place more frequent, it was resolved that in future the meetings be held every two months, and that the purser give notice to that effect.—The following report, from Mr. C. S. Richardson, was read:—

Tergeur Mine, May 28.—This mine is situate at the head of the valley, on the estate of Tregear and Trewicket, the property of Lady Granville, and held at 1-16th dues for a term of 21 years, 20 years unexpired. It is bounded on the north by the road leading to Port Gavern, from which it is only a distance of 2 miles; on the south by Wheal Sarah Silver-Lead Mine, now in full course of operation; the village of Pendogget to the west, and the several lead mines of Treburget, Trewalder, and Trewennan on the east. The principal characteristic of this mine is the number and contexture of its lodes, their well-known mineral riches, and the facility it presents for their extraction; the locality is one that commands many great advantages, its proximity to a good shipping port, from whence coal and timber may be procured on very advantageous terms, the short and easy distance the mine is from the main road, the beautiful nature of the strata in which the lodes are imbedded, the comparative trifling cost at which the underground operations can be carried on; miners are plentiful, and their several residences are close at hand, consequently, there would be a great competion in the price of labour. There is sufficient water at surface for all dressing purposes, and the underground water will be found very easy; it has the advantage of being many fms. above the Wheal Sarah Mine, which is now down to the 30 fm. level; consequently, the engine power, instead of being principally applied to pumping, may be turned to other machinery on the mine, such as sawing, stamping, crushing, drawing, jigging, &c., all of which have a tendency to save horse and manual labour, and greatly to reduce the monthly cost on the mine, as well as having a much greater quantity of labour performed, and in less time; taking these, with the numerous other advantages a careful inspection of the sett will show, it will be found that very few mines afford so enticing a source for investment of capital, with such certainty of success.

Mineral Properties.—The sett, which is very extensive, contains 6 well-known north and south lodes, the average bearing of them being about 15 degrees north east; a reference to the plan will show them, lettered from A to F; they vary in width from 2 to 6 ft., and possess, more or less, promising indications at surface. The A lode, and A No. 1, which is a caunter to A, has been sunk on at the junction several fathoms, and has proved to contain a solid body of antimony of very superior quality, which, although not at present of much marketable value, will, in a short time it is expected, become an article of great commercial importance. The B lode has been cut in the lane, between the mine and the farm place; it is 6 ft. wide, composed of gossan, with spots of silver-lead, and appears to have a true north and south bearing—it is considered to be a champion lode. The C lode is small; it has been sunk on in the winze in the adit, from whence some very favourable specimens have been taken. The D lode or, as it is locally called, the Wheal Sarah lode, is the principal, inasmuch that it has been proved to a depth of 30 fms. in the adjoining mine, where some valuable silver-lead ore is now being raised from it, at 10 fms. from surface; it is principly a strong, fine, soft gossan, very rich in silver, but so delicate in its nature that great care is necessary in dressing; the produce of the lode at this depth should never be subjected to the process of dressing by water, otherwise the silver, which is very light, would flow away; at 20 fms. a leader of silver-lead, 4 in. thick, is found, and the matrix of the lode is becoming changed. The lode is losing its gossan, and here, it may be said, it is coming into a settled country; in the 30 fm. it will be found to have settled into a permanent strata, composed of beautiful fine clay slate (light killas); the lode is 2 ft. wide, carrying a pith of silver-lead, 9 in. thick; taking an average of the lode from surface to this depth, it may be fairly valued at 10*l.* per fm. The average produce of the lode under the 20 fm. level is worth 18*l.* per ton. The water is very moderate, a 10 in. box, with a 6 ft. stroke, going 8 strokes per minute, is amply sufficient to keep the mine in fork; the ground is fair for driving, and stands without timber: the shaft may be sunk for 8*l.* per fm., and the levels may be driven for 2*l.* 10s.; everything seems favourable for a full development of the mine at a trifling cost. The lodes E and F have been opened on the backs, in the shode pits; they, however, appear very promising. There is a crosscourse in the sett, but its real bearing is undefined; therefore, any remarks on its properties would be quite superfluous.

Present Operations.—In the early stages of this mine, it was not positively known which was the most advantageous point to begin at; the proprietors, however, considered that to cross-cut the A, B, and C lode was the wisest course to pursue, as it presented the fewest obstacles in the way, and they could develope the character of those lodes at a small cost; they have, therefore, driven a shallow adit through the C lode, and intersected several small branches, and have nearly reached the B lode. A shaft has been sunk in the present end, where a tackle is fixed; the engine-shaft has been sunk about 5 fathoms, so as to take the main lodes in a central position, at 60 fms. in depth; the Wheal Sarah lode will come in about this depth. All the other lodes have been worked on by costeaning; there is a small dressing-floor and shed completed, a good count-house and store-room erected, and other useful works in readiness.

Future Operations.—To carry out this mine with economy, and make quick returns, it is essentially necessary to erect a small engine—say one of 25 horse power, and put down a double lift of 9 in. pumps, these pumps to be worked by a double throw; adjusting crank so that they may be either worked at a 2 or 6 ft. stroke, according to the quantity of water in the mine; attached to the main driving shaft some reversing gear is to be fixed, which, with a suitable pulley, is to be connected by means of a strong gutta percha driving belt, two 5 ft. drums, or horizontal whims, commonly known as engine-whims; attached to those whims is a fast and loose pulley, and a safety break, which, as the engine is never permitted to stop, will prevent the liability of damage being done by the rising kibble coming up above its proper mark. At the opposite end of the driving-shaft a spur-wheel and pinion will connect to the axle of a crusher, or stamping mill, as the case may require; but in practice it will be found that both will be necessary, in consequence of the ores possessing different qualities, and requiring various modes of treatment; to the same shaft may also be fixed a gag palley, which will communicate motion to the drums over any whim-shafts, passing from the engine to the said whim, thus preventing the necessity of using any horse labour; a small shaft should also be run into the carpenters' shop, to drive a circular saw, lathe and boring mill; this would effect an immense saving of labour, both to carpenters, smiths, and sump men, as everything would be fitted complete before it is taken underground. The kind of engine most suitable to meet this duty would be a direct-acting one, on the oscillating principle, condensing and expansive; the whole, with its apparatus and building, could be erected for about 1000*l.* By introducing machinery on this principle, a very great saving of horse hire and labour cost is effected, beside driving the works much faster than is usually done, and at 25 per cent. less cost.

The general features of the mine may be said to be very promising; there is a positive certainty of remunerative returns, quite commensurate with the risk of its prosecution. Should the operations be carried out in the principle above described, there is no doubt but that 10 tons of rich silver-lead ore could be monthly returned, the profit on which would be about 30 per cent. I have taken a careful survey of the sett, and prepared you a plan of the same, with such lodes laid down thereon as I think worthy of operating upon: I have also given you drawings of the engine, pit work, and other necessary machinery, the sections of which will assist you in forming your opinion of the principle of its economy. Any further information you may require on the subject I shall be happy to give.

EXMOOR WHEAL ELIZA MINING COMPANY.

A special general meeting of shareholders was held at the Queen's Head Inn, Tavistock, on Tuesday, the 5th June.—R. Sleman, Esq., in the chair.—The accounts having been examined and passed, the following report, from Capt. Whitford, was read to the meeting:—

June 2.—In submitting to your attention our operations since our last meeting, I beg to say, that the engine-shaft has been sunk to the 24 fathom level, a whim plat ent, the 10-in. lift dropped to bottom, and the cross-cut driven north, about 3 fms. towards the great north lode. The caunter lode has been cut and driven on 3 fms.: it is from 3 to 4 ft. wide, composed of beautiful gossan, large rocks of mundic, thickly impregnated with black and green oxides, together with sulphuret of copper. Reasoning from analogy, or from what has taken place in other mines, under similar indications, we have the most presumptive evidences, almost amounting to an absolute certainty, that it will ultimately lead to the most prosperous results; and although our progress has not been equal to our anticipations, in consequence of the great influx of water, which has very much incommoded our working, yet, as we have now materials on the mine which will be in readiness to work next week, we have reason to believe that the greater number of difficulties will be removed, and our underground operations considerably accelerated. We assure ourselves that, when the lodes are cut, and to any proper extent developed, that returns will be made such as will amply compensate for all the difficulties and outlay sustained in this important speculation.

WHEAL FRANCO MINING COMPANY.

At a general meeting of adventurers, held at Plymouth, on Wednesday, the 30th May, Wm. Burnell, Esq. in the chair,

A statement of accounts was presented, showing—Balance from last account, 374*l.* 5s. 8d.; ore bill for February, 505*l.* 17s. 6d.; ditto, March, 633*l.* 5s. 10d.=1513*l.* 9s.—Mine cost for February, 354*l.* 6s. 9d.; ditto March, 396*l.* 7s. 2d.: leaving balance of 762*l.* 15s. 1d. The accounts having been examined and passed, a dividend of 1*l.* per share was declared. Capt. John Lean was appointed superintending agent, in the room of Capt. Richard Edwards, who is about leaving England. The following report was read to the meeting:—

May 27.—The lode in the 62 fm. level, west of engine-shaft, has been intersected by a slide, which is underlaying south about 2 ft. in a fm., with a dip of about 1 in 10 westward. Before the lode was intersected by this slide, it was large, kindly, and producing some good stones of ore. It has the same kindly appearance in the part being traced forth under the slide. The lode in the 62 fm. level east is still poor, but it has much improved in its character within the last 6 ft.; and I think there is a chance of farther improvement here soon. The 47 fm. level east has been driven south into the lode; it has produced a little ore, but not of much value. The 32 fm. level east has been driven about 3 fms., through a kindly and orey lode, and it is better at present than it has ever before been. On the whole, I think the ends are a little improved since the report to the last meeting.

THE GENERAL MINING ASSOCIATION.

In last Saturday's Journal we referred to a meeting of this company, which had been held on the previous day; and, after alluding to our notice, the city correspondent of the *Morning Post* makes the following remarks:—"The General Mining Association has had an existence of some quarter of a century, but of which little or nothing has been heard for the last eight or ten years. The meeting held on Thursday last did not pass off without a very strong expression of dissatisfaction at the continuance of the close, or secret, system of management so long pursued and pertinaciously adhered to. The chair was taken by Mr. Moser, who was supported by Mr. Bridge (of the affluent Rundle and Bridge connection), Mr. Ladbroke, and others. The meeting was addressed at great length by Mr. Poynder and Mr. Mangles in favour of the directors, both gentleman having expressed themselves in highly laudatory terms of their exertions, and earnestly recommended the policy of continuing to extend to them the same unlimited confidence which has hitherto been placed in them by the proprietary. Mr. Kettle (a member of the bar), on the other hand, appeared on behalf of a large number of friends. He warned the directors that their views were totally erroneous, and that an open system of management was alone adapted to the feeling of the day, with respect to this and every other so-called 'joint-stock company.' The friends of Mr. Poynder should, on future occasions, remember that, whatever may be the ability and the eloquence of their advocate, he has but a single vote to exercise in their behalf. An amendment proposed by the learned gentleman was backed by no more than two voices. It is only due to the directors, however, to state that a very strong and respectable muster of shareholders saw no cause to condemn their proceedings. They have, it is admitted, by their unwearied attention and zeal, and even outlay of capital (advanced, as it was asserted, out of their own private pockets, though calls to a large extent have been made on the proprietors until all is called up that can be under the provisions of the charter), raised the company from bankruptcy to a state of considerable prosperity. The prospects appear at length to be most cheering. Dividends of from 1*l.* to 1*l.* 10s. per share have, it seems, been for some years distributed, but still the value of an original 20*l.* share is now only 12*l.* to 13*l.*, showing a rate of discount of some 40 per cent., a depreciation quite sufficient, it is felt, to induce directors and shareholders, before long, to co-operate with Mr. Kettle and his friends. Indeed, before the meeting, which was becoming stormy, broke up, various concessions were promised, such as regular public meetings, half-yearly, instead of 'yearly divisions of profit,' &c. If the directors, who are said to hold one-half or three-fourths of the concern in their own hands, are wise, they will do well to consider of the propriety of acting upon Mr. Kettle's suggestions. A dividend, as announced above, of 1*l.* per share was declared, payable on the 1st June next. The coal workings of both the old and new mines were, it was understood, progressing most favourably. As regards the question mooted, of 'publicity of accounts,' we hardly think a charge can be made against the management, since an invitation was boldly made by the chairman to parties to inspect them. He declared the satisfaction he would feel if they were attentively investigated; and one of the auditors affirmed that instead of there being any 'cooking' of figures or anything of the kind (an allusion to Mr. Porter's statistics, we presume), it was impossible any accounts could be kept with greater simplicity or fairness. They were, he observed, a 'model for all companies.' Thus, on the whole, the meeting separated apparently gratified by the present state of affairs as laid before it, and by the promise held out of the reforms demanded, the reasonableness of which, owing to recent disclosures in other cases, the directors did not pretend to dispute. There was, if we recollect rightly, much angry discussion some years past between the directors of this company and those of the Maryland, another association formed for the alleged purpose of working coal fields. The latter turned out to be a total failure, and, in point of fact, little better than a hoax, not to say a swindle. The contention ended in the unceremonious expulsion of one of the directors of the former company, if not of more than one. This is now a matter of remote date, but still the course taken tends to prove that the board of directors have not, throughout, acted so harmoniously together as they have recently done, and this in itself is a reason why the shareholders should be put in possession of the full knowledge of affairs contended for by Mr. Kettle. Their moneys were always forthcoming at once, whether for the construction of railways, for improved machinery, or any other desirable object; so that whatever Mr. Poynder may say as to gratitude due to managers, the shareholders have afforded them the most unbounded support."

[From the *Plymouth Journal.*]

Wheal Franco.—There is no material change since our last, but the ends are on the whole looking a little improved. The dividend of 1*l.* per share will be paid on 18th inst.

Wheal Ash.—There is still in this shaft a leader of mundic from 4 to 5 ft. wide, bearing in the spar on the north side of it, and in the mundic, occasional squats of ore.

Plymouth Wheal Yeoland.—*North Lode:* A very fine lode has been cut in the eastern pit, worth from 4*l.* to 7*l.* per fm. The other parts of the mine are unaltered.

Birch Tor and Vitifer Mines.—*Birch Tor Lode—Prideaux Shaft:* In the 10 fathom levels, east and west of this shaft, there is in the end of each a little tin, and both ends are decidedly looking better than they have done at any former period.—*The Deep Adit:* The end is still poor, and we do not expect to meet with the shoot of tin seen in the shallow adit for 3 or 4 fms. The stopes, in the back of the shallow adit, east of Hawkes' shaft, are worth 6*l.* per fathom.—*North Lode:* The ground in the end has undergone a change, and is now more favourable for driving than it has been.—*Old Vitifer Lode:* The shaft is 8 ft. under the 10 fm. level below the adit—the lode has since we resumed sinking been worth from 20*l.* to 30*l.* per fathom. The bottom of the sump is not at present so good as it has been; the lode is 2 ft. wide, and preserves its character and underlie. The driving the 10 fm. level west was resumed on Tuesday last, the men having been engaged in stoping the backs, and getting in the stulls for the convenience of working the back and end together, which they can now do without hindrance—this end is now worth 20*l.* per fathom. The stopes for the 5 fms. behind this end have averaged 12*l.* per fm. In the 10 fm. level east the men have been stoping the backs and fixing their stulls, which is now done. The ground over and under the cross-cut is disordered. The stopes are worth about 4*l.* per fathom. The ground for the bob pit has been excavated, and the masons are walling the old engine-shaft. The ground for the V bob is cleared. The stamps wheel was completed on Saturday, and the stamps axle was begun on Monday last, and will be finished by Monday the 11th inst. We have at surface from 2 to 3 tons of tin which we cannot dress, having been obliged to disengage the stamps from the engine wheel to keep the water, to enable the men to get down to fix their pit-work in the 10 fm.

level. We it tend to fix a 10-inch lift to take the water from the levels, which is now falling to the bottom of the shaft, which an 8-inch lift will not do with stamps connected with the wheel. This work will be pressed forward as fast as possible.

ASHBURTON.—It was expected ere this that the newly discovered lode of tin and copper at Holne Park Mine, would have been in full work. The appearance of the lodes at the entrance of the adit denotes a valuable undertaking to the shareholders. It is close to the river Dart, whose whole stream can be converted at a small expense to work the machine, however powerful, that may be erected on the works. The Coombe Mine still goes on briskly, and the tin sent off is exceedingly good. We hear the affairs of the Buckfastleigh Mine, which has been stopped for a short period, will be settled in a few days.

BUDNICK CONSOLS.—A meeting of adventurers was held at the account-house on Monday last, when the following accounts were passed:—By tin sold (less dues), 1547*l.* 12s. 3d.; carriage of tin, 26*l.* 19s. 7d.=1574*l.* 11s. 10d.—To costs, &c., for February, March, and April, 1550*l.* 2s. 7d.: balance carried to next account, 24*l.* 9s. 3d.

TRESAVEAN.—A meeting of adventurers took place at the mine on the 29th May, when the accounts, of which the following is an abstract, were passed:—By balance at the end of Feb., 874*l.* 15s. 6d.; ores sold, less dues, 2203*l.* 16. 9d; sundry credits, 407*l.* 18s. 6d.=3486*l.* 10s. 9d.—To costs and merchants' bills for March and April, 2578*l.* 18s.: leaving balance in hand, 907*l.* 12s. 9d.

TRETHELLAN.—At a meeting of adventurers, held at Tresavean account-house on the 29th ult., the following statement of accounts for March and April was passed:—By balance from last account, 318*l.* 2s. 5d.; ores sold (less dues), 540*l.* 16s. 4d.=858*l.* 18s. 9d.—To costs and merchants' bills, 505*l.* 6s. 7d.: balance at bankers, 348*l.* 12s. 2d.

WHEAL BASSET.—At the two-monthly meeting of adventurers, held on the 5th instant, the accounts were examined and passed, showing—Copper ores sold, 3698*l.* 16s. 4d.; tin do., 426*l.* 9s. 1d. (less dues, 275*l.* 0s. 4d).=3850*l.* 5s. 1d.—By labour cost for March and April, 1705*l.* 11s. 11d.; merchants' bills, 738*l.* 19s. 2d.=2439*l.* 11s. 1d.: leaving profit of 1410*l.* 14s.; to which add balance last account, 420*l.* 18s. 11d. = 1831*l.* 7s. 11d., from which deduct dividend, 1280*l.*: leaves in hand, 551*l.* 7s. 11d.

EXPLOSIONS IN COLLIERIES.—In another column, among the accidents, will be found an account of one of those awful catastrophes which so often shock humanity in our coal districts, and to which the Legislature, after pretending great anxiety in the matter, are still putting the subject off week after week, with the utmost *nonchalence*. Surely some steps might be taken to introduce a measure of inspection, if only for a trial. We are glad to find Mr. Hume still at his post. In the House of Commons, last evening, he said an explosion had taken place at a coal mine, on the 5th of this month, by which 24 persons had been killed; and, as such accidents were constantly taking place, he wished to know whether the right hon. baronet (Sir G. Grey) had taken any measures to ascertain the cause of them?—Sir G. Grey referred the hon. gentleman to the report which had been laid on the table of the House.—Mr. Hume trusted that some day would be fixed by the Government for the consideration of this question; and he gave notice that he should, on Monday, bring this question before the House, and trusted that the Government would fix a day for the settlement of the question which had so long agitated the public mind.—Sir G. Grey said that it was impossible at present for the Government to take such a subject into consideration; but no opportunity would be lost in bringing the matter before the House.—Mr. Wyld presented a petition from 2000 persons employed in collieries, praying that some measures might be passed to obtain the better ventilation of mines.

ACCIDENTS.

Another Awful Colliery Explosion.—It is again our painful duty to record another of those destructive calamities in a coal district, with which, unfortunately, the columns of the *Mining Journal* are too often blotted. On Tuesday morning last, between four and five o'clock, 33 men and boys went down the Hebburn Colliery, the property of Messrs. Easton and Co., situated on the Tyne, about 1¼ mile above Jarrow; and at half-past six an explosion took place, by which 32 of them were instantaneously deprived of life—one only, a man 27 years of age, being brought out alive, and has recovered; his name is Wm. Bell, but he can give no account of the accident, having been struck senseless at the moment of the explosion. There were 70 more in a distant part of the pit who were uninjured, but in two hours double the number would have been at work where the explosion occurred, which was about half a mile from the shaft, and some of the bodies were dreadfully mutilated. The cause of the accident is, of course, unknown; the pit was always well ventilated, but there are great inequalities in the roof, which varies from 5½ to 12 ft. in height, in the cavities of which the carburetted hydrogen lodges, and it is expected that the severe thunderstorm of the previous day had disturbed the ventilation. The seam, which is below the Bensham seam, requires boring, to let off the gas, and the man who performed this duty was found at some distance from the others, dead, with his Clanny lamp in order, but the wire gauze somewhat rumpled.

West Bromwich.—On Thursday morning a sudden and fatal accident happened to three men, named Orgill, Wright, and Lloyd, who were instantaneously crushed to death by a fall of several tons of coal, in a pit belonging to Messrs. Spittle, at Blacklake. Another man, named Dedicott, is so much injured, that it is doubtful if he can survive. The pit had been examined an hour before, and considered safe.

Dundee.—A. Walker, assistant engine-keeper at Kingoodie Quarries, while looking down the pit, preparatory to giving the engineer warning to put on the power, became dizzy, lost his balance, and was precipitated a depth of 75 feet to the bottom.

Farnworth.—J. Farnworth was killed by a piece of iron weighing 4 lbs. falling down the shaft on his head. The mine is the property of Messrs. Grundy, Brothers.

Batch Croft, Bildon.—T. Love, aged 7½ years, fell down the shaft at Shepherd's coal pit and was killed. His father, and his father-in-law, were both killed in the same mine.

Dudley Port.—B. Lees died last week from injuries he received in April last, by a sudden influx of water in Messrs. Hopkins's colliery, which filled the shaft to 6 yards deep.

Dowlais Iron-Works.—T. Griffiths was killed by a fall of roof.

Little Lever.—Y. Duckworth died from injuries received from a fall of coal in Mr. Fletcher's colliery about three weeks since.

Wheal Rose Stream-Works.—J. Knight was crushed by a run of about a cart load of earth, and died in three hours after.

Witton Park Colliery.—M. Robinson was suffocated here by the smoke of the underground furnace and bad air; it is supposed from circumstances that he laid down to sleep.

Brierly Hill.—A lad, named H. F. Whitehouse, fell off a bridge at the Level Iron-works (Messrs. Izon's), and suffered severe concussion of the brain, but is likely to recover.

FIRE AT WHEAL TRELAWNY MINE.—At about two o'clock on Monday morning last, the boiler-house of Wheal Trelawny Mine was discovered to be on fire. Fortunately the flames did not extend to the engine-house or any other building; the underground clothing of about 50 miners, and a few other suits, were destroyed, which loss will be partly borne by the adventurers. The working of the engine has not been suspended by the occurrence, and the origin of the fire is unknown.

NETHER HEY COLLIERY, LANCASHIRE.—In the Court of Common Pleas, on Wednesday, in the cause Bramwell *v.* Collinge, an action of ejectment was brought by the plaintiff, as perpetual curate of the chapelry of Shaw, to recover possession of the Nether Hey estate. It appeared that in 1830 one Hordern, the predecessor of the lessor of the plaintiff, granted a lease of the estate to defendant, and in 1839 renewed it, and granted all the coals under the land for 21 years, for a rental of 250*l.* It was confirmed by the bishop and the rector. In 1841 Hordern resigned the perpetual curacy, and the lessor of plaintiff succeeded, and accepted rent from defendant till 1845, when he gave them six months' notice to quit. The receipt of rent under the lease, it was contended, was an acknowledgment of its legality. The court, however, decided that the lease was granted without the necessary parties to give it validity. The predecessor of the lessor had granted a void lease, and the acceptance of rent only created a yearly tenancy. Verdict for the plaintiff.

IBERIAN SILVER AND LEAD ORE MINING COMPANY.—In the Court of Common Pleas, yesterday, a cause was tried (Neal *v.* Bates) before Mr. Baron Parke, in which the plaintiff, an engineer, claimed a certain amount due for work and labour done. The defendant, a gentleman of fortune, had paid 47*l.* into Court as all he was indebted. The defendant was connected with the Iberian Silver-Lead Company, and plaintiff's father had been engaged to procure and superintend the erection of a variety of machinery for the mines, with a stipulation that the company were to pay his assistant; he employed his own son, and it was settled that he was to receive 3*l.* per week. The works were finished, and the father left Spain on an arrangement with Volney, the managing director, that his son was to remain at the same salary. Shortly after, Volney informed plaintiff that, as he was short of money, he could only pay him 1*l.* per week while in Spain, and he should receive the balance at the offices in London; on the faith of this, he remained, but on arriving to demand the amount due it was refused. The defence set up by Mr. Crowder was that the contract was with the father. Mr. Baron Parke, however, thought, from the agreement, that the company had employed plaintiff; and the jury gave a verdict for plaintiff—damages, 64*l.* 7*s.* When Mr. Crowder found that he could not get the company out of the scrape of paying their just debts by legal chicanery, a further mean defence was set up that the plaintiff had been negligent, through which some machinery had been injured. Truly, lawyers and companies perform acts which individuals would be ashamed of.

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£23½
20,000	British North American	50	6	36½
20,000	Colonial	25	5	6½
—	Commercial of London	20	6	20½
4,000	Ionian State	25	6	24½ 25
£0,000	London Joint-Stock	10	6	15½
20,000	London and Westminster	20	6	23½ 24
10,000	National Provincial of England	35	5	35
20,000	National of Ireland	22½	6	18½
20,000	Provincial of Ireland	25	8	36
—	South Australia	22½	—	24 25½
20,000	Union of Australia	25	6	21½
10,000	Ditto New	2½	6	2½
60,000	Union of London	16	6	16½

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 31

TO ENGINEERS AND BOILER MAKERS.—The BIRMINGHAM PATENT IRON TUBE COMPANY MANUFACTURE PATENT LAP-WELDED IRON TUBES (under Mr. R. Prosser's Patent) for Marine, Locomotive, and all Tubular Boilers. Also, TUBES for Gas, Steam, and other purposes. All sorts of IRON GAS FITTINGS.
WORKS—Smethwick, near Birmingham.
LONDON WAREHOUSE—No. 6, Upper Thames-street. 32

[ADVERTISEMENT.]

"TO ALL RAILWAY DIRECTORS, SHAREHOLDERS, AND OTHER PERSONS CONNECTED WITH OR HAVING AN INTEREST IN RAILWAYS IN THIS KINGDOM, AND IN THE WORLD."

Mr. Charles Geach having made certain charges against me and my partner of being guilty, by virtue of our office, of having charged certain prices for our own iron, supplied to a company of which we are directors, of 657*l.* 5*s.* 10*d.* above what his company would have supplied the same iron for, the board of directors, with a view to ascertain the truth or falsehood of these charges, referred the matter to a committee of four gentlemen to investigate, and to report to the board thereon; and Mr. Geach was informed of this arrangement, and was promised to be furnished with their report as soon as it should be given.

Without waiting the result of this investigation, he has thought proper to commence a paper war, by repeating these charges in the public newspapers; he also states, that he has received a letter from our chairman, informing him that I and my partner have ceased to be directors in the company, in consequence of his charges.

Having heard that such a letter had been written by the chairman, it became my painful duty to attend the board, and declare my determination not to abide by such a decision, it being given simply upon the *exparte* statements of my accuser, which is contrary to all law, equity, and common justice. I positively refused to bow to such decision; demanding a fair trial, and a decision after hearing the charges and the defence—to which decision I would bow, and to no other. If found guilty, I would retire from the board at once. Besides referring the matter to a committee of four gentlemen, the board came to a unanimous resolution, that all the facts should be laid before counsel, and their decision should be final. I was asked to name a counsel, which I declined to do, preferring to leave it to the board to fix upon their own man or men: they then fixed upon Mr. Martin and Mr. Hugh Hill, and those gentlemen have since given a most decided opinion that I and my partner are still directors of the company, having done nothing to disqualify us for the office. The decision of the committee, I expect, will be given in a few days, which decision I must leave to be an answer to Mr. Geach's charges; for it would be premature in me to answer charges which are left to four gentlemen whose character and station place them above all suspicion; and I only ask the public to suspend their judgment until this decision is given. I may add, I have no fear of the result being just the same as the one given by the counsel above referred to—indeed, it cannot be otherwise, for such a tissue of falsehoods, in the shape of charges, I never before saw committed to paper, and, moreover, clothed in the darkest garb to convey deception.

The public shall form their own opinion of Mr. Geach's malignant spirit, and the extent of his pugnacious appetite, from the circumstance of his having made a most savage and ungentlemanly attack upon me in his own private room at his bank, without giving me the slightest intimation what he was about to do. I can make some allowance for a man becoming very sore, when he sees that his craft is in danger, but certainly not to the extent it has proceeded, from a quarter I have hitherto considered respectable.

I feel sorry for any man in such circumstances of indiscretion, but I must remind Mr. Geach that the world was not made for Cæsar alone, nor was the manufacture of axles ever designed for him and his partner only. Mr. Geach has had his day, and I hope has made hay while the sun shone; if not, I fear it is now too late, judging from the near approach of winter, which I can see fast gathering over his axle trade. 62

It cannot be expected that the railway public will continue to use an axle 20 per cent. inferior in strength to one they can have at the same price; and the truth of this, conveyed to them by a test that cannot err, which I have engaged to furnish free of all charges for the use of the same.
G. B. THORNEYCROFT.

PUBLIC ASSAYERS IN IRON AND STEEL.—We have received a communication from a Sheffield correspondent, in reference to Mr. Thorneycroft's proposition, for the establishment of public assayers for axles and tires, published in the *Mining Journal* of the 26th May, in which he recommends him to add to the category articles of steel—such as springs, files, &c.—particularly the first, as being of such obvious importance to the safety of the public. He states that, "at the commencement of the railway system, the price of raw steel for springs was 26*s.* to 28*s.* per cwt., made from the first marks of Swedish iron, which to the 'trade' is well known to be much the best for steel purposes; the labour on the spring was about the same (total, say, 5½*d.* to 6*d.* per lb. for the completed spring). Contracts are now taken at 22*s.* or 23*s.* per cwt.; and it is a fact that the best descriptions of Swedish irons have not been reduced more than 3*l.* to 4*l.* per ton—so that the finished spring is now sold much under the former price of the raw steel; and it is evident that *common* iron must be substituted for the best. *Query:* Is this *economy* in its strictest sense, where life and limb depend so much on a good spring; and especially now, when crowded pleasure-trains are of common occurrence, and when the simple breaking of a spring might endanger so many people?" There is much reason in his remarks; and, in support of his views, we have noticed an article in an American paper, in which it is stated, that the steel imported from England is not of near so good a quality as it was formerly, and that the Adirondac Steel Manufacturing Company, in New Jersey, are producing steel of far superior quality from ore in the western part of Essex County, New York, where it is absolutely inexhaustible; while their works, being in the centre of an extensive primeval forest, they could supply the whole union for a century—thus our manufacturers must see that they are losing their foreign trade from an attempt to debase the quality of the article.

IMPROVEMENTS IN TUYERS FOR FORGES.—Mr. Camp, of the Grove Iron-Works, Hartford, Connecticut, has taken out a patent in America, for a new tuyere—from the description of which, it certainly appears to possess advantages over those hitherto in use. The tube from the bellows leads into an air box beneath the forge plate—in the centre of which is a rectangular orifice, for the reception of a revolving regulator. This is a square rectangular iron box, having round its four sides perforations of different dimensions, by which the quantity of air can be nicely regulated; for by turning round the grate till its edge becomes the apex, air will be admitted from two sides; while, by turning it till its plane coincides with the face of the hearth plate, air will only be admitted through one of its sides; while the edges break off the scale which forms—the latter falling through into a drawer beneath its opening, made, of course, air-tight. The patentee also makes his hearth plate slightly concave instead of convex, whereby his fire is kept continually more in the centre and the broken clinker makes towards the revolving grate.

IMPROVEMENTS IN BLASTING.—In the *Transactions* of the Institution of Civil Engineers, Ireland, is a paper, by John M'Clean, Esq., on the subject of forming chambers in calcareous rocks at the foot of the bore-hole, with a view to obtain the most effective and economic result of the gunpowder exploded. The method, which has been communicated to the Lords of the Admiralty, is one in operation at the quarries at Marseilles—the apparatus employed, although rude, appearing effective for the purpose. The rock is pierced in the usual way by a 2½-in. jumber, to a depth of from 5 to 7 ft. generally, in a slanting direction, according to the shape and size of the rock to be detached; a copper pipe is then introduced, the size of the bore, with a bent neck springing from its side at the upper part; and the orifice round the outside of the tube being closed up tight with clay, so that no air can enter. Through the copper tube was introduced a small leaden one, about ½ an inch in diameter, formed with a funnel at top—the other ends reaching the bottom within an inch. The orifice between the tubes is stopped with hemp packing. Dilute nitric or sulphuric acid is now poured through the funnel and leaden pipe, and on arriving at the bottom it produces effervescence, and at the end of a few minutes the frothy substance of the dissolved rock begins to run out of the bent portion, and so long as the dilute acid is poured in the action continues, until, by the quantity of matter ejected, the size of the chamber is judged of, and when large enough for the quantity of powder to be employed the tubes are withdrawn, the hole soon gets sufficiently dry by the action of the acid, the gunpowder is charged as usual, and a much more powerful effect, with a considerable saving in cost, is obtained.

IRON BLAST—PATENT CASE.—At Trenton, New Jersey, a case was tried for the infringement of a patent (Alger *v.* Esdell) for an improvement in the arrangement of the blast pipes leading from the heating oven, or cylinder, to the tuyeres, which were placed inside of the stack, between the lining and the stonework, by Mr. Alger, instead of bringing them down on the outside as in the old way. This arrangement was adopted by Mr. Esdell, with the addition of a large box of cast-iron behind the lining of the boshes, through which the air also passed to the tuyeres. This was used 15 months before the suit was brought. The effect of the improvement was held to be the keeping of the supply blast at an equable temperament.—The defendant contended that the additional box behind the boshes altered the nature of the invention—that Alger's produced an inferior article of iron than was produced before its introduction, with a greater consumption of stock. This defence was held to be of no consequence as affecting the matter of infringement; but only as one of degree for the amount of damages.—A verdict was given for the plaintiff of $350.—*Scientific American.*

CLYDESDALE JUNCTION RAILWAY.—This railway was opened for passenger traffic on Friday, the 1st inst. The trains from London and the south, as well as the local ones, now pass by this route to and from Glasgow. We congratulate the directors of the Caledonian Railway Company upon the opening of this most important addition and contributory to the parent line; and the engineers also, for the excellent manner in which the works (passing along a varied country and difficult soil) have been constructed.

The *Gloucestershire Chronicle* states that Mr. Blackmore, M.P., has signified his intention of taking 100 shares, value 10,000*l.*, in the Monmouthshire Railway and Canal Navigation, which is about to be extended, being anxious to furnish the important mineral district, with which that line is connected, with the means of transporting its produce to market, thereby promoting the prosperity of the port and town of Newport, and of the populous neighbourhood by which they are surrounded.

New Patents.

SPECIFICATIONS ENROLLED DURING THE PAST WEEK.

J. H. Porter, Adelaide-place London-bridge, engineer, for an improved mode of applying corrugated iron in the formation of fire proof floors, roofs, and other like structures. Two or more plates of corrugated iron are riveted together, with the corrugations of the one placed opposite to the corrugations of the other, so as to form a series of hollow joists or beams; and, in the case of being used in the place of rafters to support a flooring, the spaces between the corrugations are filled with concrete. These plates may be employed in a vertical, horizontal, or inclined position, and may have the form of the corrugations varied according to pleasure.—*Claim:* The application of corrugated iron in the formation of fire-proof floors, roofs, and other like structures.

T. Drayton, Regent-street, practical chemist, for improvements in silvering glass and other surfaces. The patentee proposes to silver the surfaces of glass and metal by means of a solution composed of 1 oz. of hartshorn or ammonia, 2 ozs. of nitrate of silver, 3 ozs. of water, and 3 ozs. of spirit (by preference, spirit of wine.) This mixture is allowed to stand for three or four hours, and then filtered, after which ½ oz. of saccharine matter (by preference, grape-root sugar), dissolved in half a pint of spirit, and half a pint of water, is mixed with every ounce of the filtered fluid. The glass is heated to 160° Fahr., and a quantity of the fluid poured upon it. When the silver is deposited and dried, it is to be coated with a suitable varnish, to preserve it from the effects of the weather.—*Claim:* The patentee does not confine himself to the precise details, so long as the peculiar character of the invention is retained, whereby silver is deposited on surfaces by means of a solution of that metal, without being previously coated or the use of oil.

J. Dudley, Northampton, ironfounder, for certain improvements, in the construction and arrangement of stoves for cooking and other purposes.—*Claims:* 1. The raising or lowering the bottom of grates, by means of two rack bars and pinions.—2. The arrangement of two moveable flaps and a blower, by a suitable disposition of which the stove may be made to open or close, and the products of combustion allowed to pass directly to the chimney, or compelled to pass through flues first.—3. A mode of heating an oven, which consists in causing the flame and smoke to pass around it, and through a hollow central shaft.—4. Heating and ventilating an oven by causing currents of air to pass into the interior thereof.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

W. Goose, Birmingham, manufacturer, improved machinery for manufacturing nails.

W. H. Smith, Fitzroy-square, civil engineer, for certain improvements in breakwaters, beacons, and moorings, parts of which are applicable to other purposes.

G. Simpson, Buchanan-street, Glasgow, civil and mining engineer, for a certain improvement or improvements in the machinery, apparatus, or means of raising, lowering, supporting, moving, or transporting heavy bodies.

S. Dunn, Doncaster, for improvements in constructing tunnels, and in apparatus to be used for such or similar purposes.

T. Lawes, City-road, for improvements in generating steam, and in the means of obtaining and applying motive-power.

W. Newton, Chancery-lane, civil engineer, for improvements in stoves, grates, or fire places, and in warming or heating buildings. (Being a communication.)

T. Jowett, Burrage House, Bingley, stuff manufacturer, for certain improvements in the method of stopping power looms, and preventing injury to the cloth, or fabric, in the course of being woven.

G. H. Bovill, Abchurch-lane, engineer, for improvements in manufacturing wheat and other grain into meal and flour.

J. Hulot, Rue St. Joseph, Paris, manufacturer of fabrics, for improvements in the manufacture of the fronts of shirts.

D. Miller, civil engineer, of Glasgow, for certain improvements in the mode of drawing ships up an inclined plane out of water.

V. H. Laurent, France, engineer, for improvements in looms for weaving.

O. Field, London, merchant, for improvements in anchors. (Being a communication.)

A grant of an extension of her Majesty's letters patent for the term of five years from the 27th of May, 1849, to T. H. Birley, assignee of George Bodmer, the original inventor of an invention for certain improvements in machinery for preparing, roving, and spinning cotton and wool.

T. Masters, Regent-street, gent., for certain improvements in the construction and arrangement of apparatus for cooking, heating, and evaporating fluids, and obtaining decoctions and infusions from certain vegetable and animal matters, parts of which improvements are applicable to certain chemical processes.

R. Wilson, of Low Moor Iron-Works, Bradford, York, engineer, for improvements in steam-engines and boilers, and methods of preventing accidents in working the same.

B. A. Burton, John's-place, Southwark, engineer, for certain improvements in the manufacture of pipes, tiles, bricks, stairs, copings, and other like or similar articles from plastic materials; also improvements in machinery to be employed therein.

J. E. H. Payne, Great Queen-street, Middlesex, coach-lace manufacturer, and H. W. Currie, engineer, for improvements in the manufacture of coach-lace and other similar looped or cut-pile fabrics.

C. J. Anthony, Pittsburgh, America, machinist, for certain new and useful improvements in the means of treating unctious animal matter.

W. H. Ritchie, Brixton, gent., for improvements in fire-arms.

John Houston, Nelson-square, surgeon, for improvements in obtaining motive power when steam and air are used.

G. F. Picault, Rue Dauphin, Paris, cutler, improvements in appartus for opening oysters.

D. Hebson, Liverpool, engineer, for improvements in steam-engines.

H. Knight, Birmingham, mechanical engineer, for certain improvements in apparatus for printing, embossing, pressing, and perforating.

S. B. Smith, Birmingham, electro-plater and gilder, for improvements in depositing metals and obtaining motive-power, part of which improvements are applicable to other certain similar useful purposes.

J. Steel, Horton, York, and B. Emmerson, of the same place, overlooker, for improvements in power-looms.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

McKean Perkes, and Co., Liverpool, iron house.
T. Thornton, Great Cartee-lane, steam escape.
Ransomes and May, Ipswich, wrench or spanner.
G. Stocker, Holborn, knife and fork cleaning machine.
W. Couch, Skinner-street, revolving carpet brush.
E. R. Beedle, Workingham, ventilating brick.
C. A. Tordery, Cathedral Hotel, parts of a stock.
T. De La Rue and Co., Bunhill-row, envelope.—*Mechanics' Magazine.*

RAILWAY TRAFFIC RETURNS.

Names of Railways.	*Length.* 1849	1848	*Present actual cost.*	*Price p. share.*	*Div. 1848*	*Traffic returns.* 1849	1848
Aberdeen	33	16	1,600,447	17½	—	£ 700	£—
Belfast and Ballymena	37½	37½	——	20½	5*	481	416
Birkenhead, Lancashire, & Chesh.	19	18	1,038,204	37	5†	1176	703
Bolton, Blackburn, & West Yorksh.	14	—	786,384	7½	—	673	—
Bristol and Exeter	75½	73½	2,660,490	64	—	4942	—
Caledonian	141	141	4,865,135	26½	3	5489	3943
Chester and Holyhead	84	59½	3,358,317	14½	4	1910	602
Dublin and Drogheda	35½	35½	774,875	29	—	927	797
Dublin and Kingstown	7½	7½	595,915	—	—	1378	1429
Dundee, Perth, & Aberdeen Junc.	47½	47½	844,554	2	6½	1148	921
East Anglian (Lynn to Ely)	9½	5½	1,167,194	2	—	722	498
East Lancashire	75½	24	2,628,519	16½	5	3017	1040
Eastern Counties and Norfolk	322	295	13,027,069	8½	—	16464	14718
Eastern Union	50½	50½	1,712,703	13	—	1510	1217
Edinburgh and Glasgow	57½	52½	2,644,378	42½	5	4142	3430
Edinburgh and Northern	78	34	2,222,115	10½	2	2801	1529
Glasgow, Paisley, and Ayr	102½	74	2,574,350	56½	3	3127	2176
Glasgow, Paisley, & Greenock	23	23	648,328	13	2	1086	1145
Gt. Northern & East Lincolnshire	126	—	4,255,171	9½	5†	2154	—
Gt. Southern & Western, Ireland	168½	110½	3,172,519	29½	6†	3538	2364
Great Western	230½	206½	11,608,315	77½	6½	18051	20675
Kendal and Windermere	10½	10½	174,600	5	—	202	150
Lancaster and Carlisle	70	70	1,476,102	49	4½	2799	1855
Lancashire and Yorkshire	206½	137½	9,218,450	25	5½	17558	9483
Liverpool, Crosby, & Southport	13	—	84,455	—	—	148	—
London and North Western	435	428	28,077,942	126	7	45226	42034
London and Blackwall	5½	4	1,299,675	4½	1-12	1070	1257
London, Brighton, & South Coast	170	162½	6,362,281	36½	2½	10213	12508
London and South-Western	216½	194	7,510,689	35	5½	12381	9625
Londonderry and Enniskillen	14½	14½	171,036	16	—	146	145
Manchester, Sheffield, & Lincolnsh.	129½	94½	6,048,679	26 7	5	4999	2556
Midland Company	471	423½	14,042,340	68½	5½†	23915	20135
Midland Great Western (Irish)	50	36½	725,332	24½	4†	1104	1641
Moukiands	37	—	500,000	—	6	721	—
North British	109½	83	3,649,055	13½	4½	3074	2070
Scottish Central	45½	—	1,364,228	24	7	1837	641
Shrewsbury and Chester	48	23	960,618	12½	5	1455	597
South Devon	57½	29	1,909,232	13	5	1776	1351
South-Eastern	165½	165½	8,116,914	20½	5½	10829	8261
Taff Vale	40	40	879,110	—	7½	2407	1668
Ulster	36	36	733,829	4½	—	758	767
West Cornwall	13	—	——	—	—	248	—
Whitehaven Junction	12	12	150,879	9½	3	243	207
York, Newcastle, & Berwick	209	242½	6,827,940	20½	7	12975	19003
York and North Midland	238½	234	4,983,618	31½	7	7544	8179

* Per cent.—† Interim.—Total for last week, £233,370, being an increase of £30,903 over last year.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 13 9—Buddle's West Hartley 14—Carr's Hartley 14—Hastings Hartley 14—Holywell Main 14 6—New Tanfield 13 6—Old Tanfield 12—Ord's Redheugh 12 6—South Peareth 13—Tanfield Moor 13—Tanfield Moor Butes 12 6—Townley 13—West Hartley 14—Wylam 13 6—Wall's End Elm Park 14—Gibson 13 9—Walker 13 9—Washington 13 9—Eden Main 15—Bell 15—Hetton 16 6—Hutton 15—Morrison 14 6—Pemberton 14 3—West Belmont 15—Heugh Hall 14 9—South Hartlepool 15 3—Whitworth 12 9—Adelaide Tees 15 6 to 15 9—Seymour Tees 14 9—Tees 16 3—West Hetton 14 6—Cowpen Hartley 14—Hartley 13 6—Sidney's Hartley 14—Whitworth Coke 21—Elgin 13 6.—Ships at market 96; sold, 57.

WEDNESDAY.—Bate's West Hartley 13 9—Buddle's West Hartley 14—Carr's Hartley 14—Holywell Main 14 6—New Tanfield 12 6—North Percy Hartley 13 9—Old Tanfield 12—Ord's Redheugh 12 6—Tanfield Moor 13—Walker's Primrose 12—West Hartley 14—Wylam 13 6—Windsor Pontop 12 6—Wall's End Acorn Close 14 6—Bewicke and Co. 14 6—Hebburn 14—Washington 13 9—Wharncliffe 14 6—Eden Main 15—Lambton Primrose 15—Haswell 19 9—Lambton 15 9—Morrison 14 6—Russell's Hetton 16—Stewart's 16 6—Heugh Hall 14 6—South Hartlepool 15—Tees 16 3—Cowpen Hartley 14—Derwentwater Hartley 14—Hartley 13 6.—Ships at market, 103; sold, 53.

FRIDAY.—Bate's West Hartley 13 9—Buddle's West Hartley 14—Adair's Main 12—Hasting's Hartley 13 6—New Tanfield 12 6—North Percy Hartley 13 9—Old Tanfield 12 Original Tanfield 11 6—Ravensworth's West Hartley 12 6—Tanfield Moor 12 6—Tanfield Moor Bute's 12 6—West Hartley 14—Wylam 13 6—Wall's End Acorn Close 14 6—Brown's Gas 12—Gosforth 14 3—Hilda 13 6—Hedley 14 3—Killingworth 13 9—Percy 13 6—Riddell's 14—Braddyll's Hetton 15 6—Belmont 16—Hetton 16—Haswell 16 6—Lambton 15 6—Morrison 14 3—Pemberton 14—Russell's Hetton 15 6—Stewart's 16 6—Whitwell 14 3—Kelloe 15 6—South Hartlepool 15—West Hartlepool 14 9—Whitworth 12 9—Adelaide Tees 15 3—Cowndon Tees 14 3—Tees 16 3—West Hetton 14 6—Hartley 13 6—Whitworth Coke 20.—Ships at market, 134; sold, 93.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 193½ 5 4½
3 per Cent. Reduced Ann., 90½ 90
3 per Cent. Consols Ann., 91¼ ¼ ¼
3½ per Cent. Ann., 91 90½
Long Annuities, 8½
India Stock, 10½ per Cent., 250 51
3 per Cent. Consols for Acc. 91⅝ ½
Excheq. Bills, 1000*l.* 2d. & 1½d. 47 pm.

Belgian, 4½ per Cent., 79 ⅛
Dutch, 2½ per Cent., 50½ 50
Brazilian, 5 per Cent., 77
Chilian, 6 per Cent., 92½
Mexican 5 per Cent., 28½
Russian, 5 per Cent., 101 2
Spanish, 5 per Cent, 16½
Ditto 5 per Cent., 33½

MINES.—The business transacted this week has been of a very limited character. We find buyers for most of the leading mines, but the offers made are generally much under sellers' quotations. East Wheal Rose, Devon Great Consols, South Frances, West Buller, West Caradon, and several others, have been sought for at lower prices.

Tamar Consols are inquired for; the mines are looking well and productive; the average monthly profit for the past five months has been over 450*l.* per month.

Tincroft shares are also in request. We learn that the improvements for the last four months have been progressive, especially in Chapel's lode; at four different points the lode averages upwards of 12*l.* per fm. From Stainsby's 23 tons of copper ore have been sold, realising 9*l.* 11s. 6d. per ton—this being the first sampling from there.

Camborne Consols have been in request at improved prices; but we have not heard of many sales.

Llwynmalees, we learn, have been done at an advanced price, and that inquiries are being made for them.

Shares in the following mines have changed hands:—Devon Great Consols, Trelawny, Mary Ann, West Caradon, Trehane, Par Consols, Mendip Hills, Tincroft, Condurrow, Llwynmalees, Esgair-Lli, Wheal Frances, Birch Tor, &c.

At the Exmoor Wheal Eliza meeting the agent's report stated that, from the highly promising indications, there was most presumptive evidence that their proceedings would lead to highly prosperous results.

At the Antimony and Silver-lead meeting, a report from Mr. Richardson was presented, which, as will be seen, gives a flattering view of the prospects of the mine.

At the South Caradon meeting, a dividend of 5*l.* per share was declared, leaving balance in hand about 100*l.* The mine, we are informed, is looking well. A new engine has been erected on a shaft on the south-east part of the sett, which will be set to work in a few days. The indications in the shaft are of a favourable description, and there is little doubt of their having a new and productive mine in that direction. We have not received the usual official circular, but have been favoured with the above from an authentic source.

At the Wheal Franco meeting, the accounts showed a profit on February and March working of 388*l.* 9s. 5d. The balance to credit of company amounted to 762*l.* 15s. 1d., from which deduct a dividend of 1*l.* per share: leaving credit of 374*l.* 15s. 1d. to next account. The agent's report states, that the lode in the 62 fm. level west was disordered by a slide; previously the lode was producing good stones of ore, but the part traced under the slide has similar appearances. The mine generally is considered improved since the last meeting.

At the Tresavean meeting, the accounts for March and April showed ores sold, 220*l.* 16s. 9d., and a balance left in hand of 907*l.* 12s. 9d.

At the Trethellan meeting, the accounts showed ores sold March and April, 540*l.* 16s. 4d., and a balance in hand of 348*l.* 12s. 2d.

At the Budnick Consols meeting, the accounts showed tin sold, 1547*l.* 12s. 8d., and a balance to next account of 24*l.* 9s. 8d.

At Wheal Basset meeting a dividend of 10*l.* per share was declared, leaving balance in hand, 551*l.* 7s. 11d. The accounts show a profit of 1410*l.* 14s. on March and April working. The copper and tin ores sold during that period realised 4125*l.* 5s. 5d., and the balance brought from last account 420*l.* 18s. 11d.

At the St. John del Rey meeting the 19th annual report was read, which brings down the financial statement to 31st May. The gold remittances from 10th May, 1848, to 28th February, 1849, amounts to 80,852*l.* 11s. 2d., producing profit of 33,333*l.* 8s. 8d. A dividend of 17s. 6d. per share was paid in December last, and 25s. was declared yesterday, being 2*l.* 2s. 6d. per share for the year, carrying 10,000*l.* to reserve fund, and a credit to next account of 10,416*l.* 8s. 8d. The remittance of gold, to the amount of 14,422*l.* 2s. 6d., by the *Express*, arrived on the 2d. The mining report is highly satisfactory, which is given in detail in another column.

By the India Mail, we are advised of the continued firmness of the metal markets of the East. At Calcutta and Bombay, we find that the copper market continues much the same as last advised; but in iron there had been considerable business, especially for Swedish bar, and that the stocks were only moderate.

In foreign mines the transactions in shares have been limited—the business done during the week having been chiefly in St. John del Rey, Guadalcanal, United Mexican, Copiapo, National Brazilian, &c. Yesterday, there appeared to be an inquiry for Guadalcanals, probably from the letters received in town, advising some important discovery in the 31 fm. level.

Dispatches have been received by the St. John del Rey, National Brazilian, and Copiapo Mining Companies.

The St. John del Rey letters are to 29th March, and furnishes the returns of 21 days at 14,514 cits., from 933·52 cubic feet of sand. The stone from which the gold is extracted is represented as abundant. The supply of water is shown as fully adequate to all requisite purposes, and that greater facilities would be afforded by a proposition submitted by the superintendent for the consideration of the directors—a detailed statement of which will be found in another column.

The National Brazilian advices are to 24th March, and give the returns from the 15th to that date, at mks. 8 7 4 71; Cocaes producing mks. 5 5 3 61, and Cuiaba, mks. 3 2 1 10. By the agent's report of the mines they are still going through favourable ground, towards the point where the Cavaco and Bandeira lodes are expected to form a junction.

The Alten Company have received the monthly report, furnishing the returns for April at 148½ tons of copper ore. The Raipas is reported to have improved generally.

The Copiapo report for February is before us. At the Checo Copper Mine, the lode in the winze, below the 12 fm. level, had been disordered by a slide, but is resuming a more favourable position. Other parts of the mine are looking well, and promising great improvements. In the San Pedro mine the operations are limited, in consequence of the scarcity of workmen; the ends are not now productive, but there is good stoping ground, and the ore of rich quality. The produce for the month is 51 tons. The *Balgownie* had shipped 450 tons of copper ore. The silver mines of Al Fin Hallada are represented to be highly productive, the calculations by last report are fully borne out, and the next advices are likely to be more satisfactory. The San Jose del Carmen and Mercedes Mines are also looking well; but from circumstances (which the manager has explained in his report) a correct estimate could not then be given, but he fully calculates on furnishing some gratifying communication by the next dispatch. The gold mines of Lequenda Esperanza and Chacabuca are also in a very satisfactory position, and some good work in course of returning. By the next packet a remittance of silver, to the value of $16,000, and from 6 lbs. to 8 lbs. of gold may be expected.

The following arrivals of specie have taken place since our last:—*Her Majesty's* packet *Express*, arrived at Falmouth, from the Brazils, on Saturday, June 2, bringing specie to the amount of 20,000*l.* on freight. The Royal Mail steam-ship, *Trent*, arrived at Southampton, on Sunday, the 3d inst., with the usual West India mails, and specie, value 3 937,400 on merchants' account, 797 ozs. of gold dust, British coin value 423*l.* 16s. 6d. sterling, 9323 5-franc pieces—total value of bullion, 191,955*l.* sterling. The Peninsular and Oriental steam-ship, *Iberia*, arrived at Southampton on Sunday evening, having on freight 15 packages of specie, and one box of diamonds. The Peninsular and Oriental steam-ship, *Erin*, arrived at Southampton, on Wednesday, having on freight a valuable general cargo and specie, value 50,000*l.* sterling.

The iron and timber trade is nearly extinct for the present on the Trent, in consequence of the blockade of the Elbe. Business on the principal wharfs was never known to be in such a languid condition, with slight hope of permanent improvement.

THE FRENCH MINING INTEREST.—The address of the President of the Republic of France has been promulgated, from which it is evident, among the numerous interests to which the Government have had their attention directed, that of mining has not been neglected. It is stated that, "In spite of the commercial crisis of 1848, some progress has been made in the mining and smelting departments. Forty-five new mining licenses have been issued; the joint number of the last three years amounts to the same. From the 1st of January to the 18th of May, 1849, ten more licenses have been issued. The smelting-houses have likewise progressed. In 1847, 36 were granted; in 1848, the number was 55; since the 1st of January there have been 19. The geological map is finished and published." With respect to public works, we are informed that although an increase would have been desirable, as finding work for the unemployed, the state of the finances were obliged to decree considerable reductions in the works on the roads, on the banks of rivers, and at sea-ports. The great line of railway between Paris and Marseilles has been opened, and is now managed by the Government. Some portions of other lines have also been opened. The building-works at the Mining School, the Library, St. Genevieve, the Polytechnic School, and the Lyons Veterinary School have been continued.

CONTRACTS FOR COALS.—The Commissioners of Chelsea Hospital will, on Tuesday, receive a contract for supplying the Hospital with 800 tons of either Stewart's, Lambton's Braddyl's, or Haswell's Wall's End coals of the best quality.

COALS FOR EGYPT.—The Committee of the East India House will on Wednesday, the 20th inst., receive tenders for 1000 tons of coal of the undermentioned sorts, to be delivered at Alexandria:—West Hartley, Carr's ditto, Buddle's ditto, Davison's ditto, Hartlepool West Hartley, and Stewart's Wall's End steam coal, screened, for the use of their mail steam-packets.

HIGH LEVEL BRIDGE, NEWCASTLE.—On Thursday the central metal arch of the above work was completed, being the last of the series of central arches of which this magnificent structure consists.—*Durham Advertiser.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	8 ..	10
1024	Alfred Consols	8½ ..	7½
1000	Antimony & Silver-Lead	5 ..	5½
1044	Ashburton United Mines	8½ ..	12
1624	Balliswhidden	9 ..	18
128	Bamboo Consols	42½ ..	50
10000	Banwen Iron Co.	6 ..	6
1000	Barristown	5½ ..	1½ 2
1000	Bawden	1 ..	1½ ¾
4000	Bedford	2½ ..	3½ 3½
1244	Birch Tor Tin Mine	9 ..	5½
8000	Bisenavon	50 ..	12½
5000	Blisland Consols	1 ..	6
100	Botallack	182 ..	25
120	Brewer	5 ..	3
10000	British Iron, New, regis.	12 ..	8
—	Ditto ditto, scrip	10 ..	10
128	Budnick Consols	52½ ..	12½
1000	Callington	20 ..	14
1000	Camborne Consols	6 ..	6 6½
20000	Cameron's Steam Coal	7 ..	1 2
256	Caradon Copper Mine	9½ ..	1½
256	Caradon Mines	22½ ..	10
256	Caradon United	24 ..	5 8
256	Caradon Wh. Hooper	21 ..	4¼
1000	Carn Brea	15 ..	104
3000	Carthew Consols	1½ ..	5
114	Charlestown	220 ..	—
500	Comblawn	5½ ..	4½
128	Comfort	45 ..	60 65
256	Condurrow	20 ..	90
2560	Cook's Kitchen	14 ..	2½ 3
1000	Coombe Valley Quarry	3½ ..	4½
1000	Copper Bottom	1½ ..	6½
212	Cruddock Moor	23½ ..	5
128	Cregg Braws	120 ..	30
500	Cubert Mine	12½ ..	—
1000	Cwm Erfin	3 ..	2½
300	D. Prior & Buckfastleigh	— ..	—
7100	Derwent	8½ ..	5
845	Devon & Courtenay Con.	7½ ..	—
1024	Devon Great Consols	1 200	5 10
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	15
2560	Drake Walls	5½ ..	3 4
10000	Durnum County Coal	45 ..	9
3000	Dyngwm	10 ..	12½
512	East Alfyenney	5½ ..	6
2300	East Birch Tor	3 ..	3½
112	East Caradon	47 ..	47
2048	East Crowndale	6½ ..	4
512	East Combe Silver-Lead	6½ ..	6½
128	East Pool	15 ..	60
9000	East Tamar Consols	4 ..	¼ ¼
94	East Wheal Crofty	125 ..	65 70
1024	East Wheal Fortune	2 ..	3
128	East Wheal Rose	50	550 600
—	East of Scotland Iron Co.	5 ..	1½
123	East Wheal Seton	14 ..	10
1280	Esgair Lli	1½ ..	3 3½
248	Exmoor Wh. Eliza	6 ..	6
494	Fowey Consols	40 ..	45
1024	Freidd Llwydd Mines	1½ ..	3½
6400	Gadair	2 ..	2
4000	Gen. Mining Co. for Irel.	1½ ..	1½
256	Gonamena	44½ ..	16
128	Goonvrea	4 ..	2
256	Grambler & St. Aubyn	80 ..	12 15
100	Great Consols	1000 ..	120
512	Gt. Wh. Rough Tor Con.	18½ ..	20 22
2000	Growa Slate Company	5 ..	5
256	Gwinear Consols	7 ..	1
6000	Heigneton Down Con.	1½ ..	1½
256	Herodsfoot	27 ..	12½
10000	Hibernian	12½ ..	1½
239	Hobb's Hill	6 ..	1½
1000	Holmbush	22 ..	10 15
1536	Holne Park	2 ..	5
1024	Kingsett and Bedford	1 ..	5 7
787	Kirkcudbrightshire	8½ ..	3 4
2016	Lamberoose Wh. Maria	7½ ..	2
952	Lanarth Consols	— ..	4
128	Leiant Consols	90 ..	40
160	Levant	— ..	180
1000	Lewis	16 ..	10½
1000	Llwynmalees	8 ..	8 8½
3600	Llynvi Iron	50 ..	50
256	Lostwithiel Consols	19 ..	14
6000	Marke Valley	10 ..	¾ 1
5000	Mendip Hills	3 ..	1 1½
128	Metha	34 ..	—
20000	Mining Co. of Ireland	7 ..	4½ ¾
1280	Nantycrin	4 ..	4
256	New East Crowndale	3½ ..	2½
100	North Pool	45 .	640
140	North Roskear	5½ ..	150
262	North Wh. Leisure	1½ ..	2
256	North Wheal Basset	10 ..	10 12
15000	Northern Coal Co.	23 .	2
128	Par Consols	55½ ..	800
8000	Pennant & Craigwen	2 ..	2
1024	Penzance Consols	18s 3d ..	3
512	Plymouth Wh. Yeoland	6½ ..	6
200	Polsaith Consols	5½ ..	4½
2500	Rhoswiddol & Bacheldon	10 ..	10
10000	Rhymney Iron	50 ..	13
10000	Ditto New	7 ..	6½
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
2048	Runnaford Coombe Tin	¾ ..	12

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
9000	South Tamar	¼ ..	⅛
128	South Caradon	5 ..	400
1100	South Dolcoath	4 ..	5
256	Sth. Friendsh. Wh. Ann	30 ..	28 30
256	South Molton	5 ..	14
256	South Tolgus	14 .	5½
256	South Treluswy	28½ ..	2 3
2000	South Wales Mining Co.	¼ ..	1 1½
128	South Wheal Basset	20½ ..	800 10
124	South Wh. Frances	160 ..	250 60
256	South Wh. Josiah	— ..	3
1000	South Wh. Maria	2½ ..	1½
10000	Southern & Western, Irish	2 ..	4
280	Spearne Moor	30 ..	40
256	St. Austell Consols	9 ..	—
94	St. Ives Consols	— ..	70 90
128	St. Michael Penkivel	5 ..	10½
999	St. Minver Consols	1 ..	6
1000	Stray Park	43 ..	17
9600	Tamar Consols	3 ..	7½ 8½
1024	Tavy Consols	6 ..	1½ 2
6000	Tincroft	7 ..	11 11½
1000	Tin Vale	2½ ..	2½
58	Tokenbury	170 ..	10
256	Tregordan	2 ..	3 4
256	Trehane	1½ .	25
5000	Treleigh Consols	6 ..	2½ 2½
2000	Trenance	3 ..	—
96	Tresavean	10 ..	120
120	Trethellan	5 .	15 16
120	Treviskey and Barrier	130 ..	85
288	Treveal	1½ ..	5
100	United Mines	300 ..	200
256	Wellington Mines	25 ..	35 40
128	West Buller	10	375 400
256	West Caradon	20 ..	125
512	West Fowey Consols	40 ..	12
256	West Providence	9 ..	15
200	West Seton	40	190 200
—	West of Scotland Iron Co.	240 ..	90
120	West Trethellan	5 ..	16
256	West United Hills	— ..	4½
512	West Wheal Frances	1½ .	2
256	West Wh. Friendship	9 ..	8
3725	West Wheal Jewel	12 ..	¼ 1 ¼
256	West Wheal Tolgus	80 ..	11 12½
256	West Wheal Treasury	19 ..	4½ 5½ 8
1024	Wheldon Mines	4½ ..	2
5200	Wicklow Copper	5 ..	7½
107	Wheal Adams	79 ..	30
1000	Wheal Agar	— ..	8
256	Wheal Albert	10 ..	4
240	Wheal Anderton	25½ ..	29½
128	Wheal Ann	— ..	50½
512	Wheal Anna Maria	6½ .	8
1024	Wheal Ash	4½ ..	8
120	Wheal Bal	5½ ..	15
256	Wheal Benny	14½ ..	2
256	Wheal Bincowe	21 ..	12
256	Wheal Bucketts	20 ..	8
2324	Wheal Calstock	9 ..	15
268	Wheal Courtenay	12½ ..	—
256	Wheal Fortescue	6½ ..	—
388	Wheal Franco	27 ..	12 15
128	Wheal Harriet	45 ..	—
100	Wheal Henry	— ..	20 5
112	Wheal Margaret	79 ..	200
512	Wheal Mary Ann	5 ..	20 21
208	Wheal Mary Consols	60½ ..	8
—	Wheal Peniule	— ..	12
210	Wheal Prospect	4 ..	7
120	Wheal Reath	41 ..	150
128	Wheal Rose	60 ..	3
198	Wheal Seton	214 ..	250
180	Wheal Sisters	35½ ..	5
494	Wheal Sophia	4½ ..	5
128	Wheal Spearne	10 ..	70
128	Wheal St. Ann	30 ..	35
550	Wheal Trescoll	7 ..	10
260	Wheal Trelawny	7½	75 80
256	Wh. Tremaine (St. Ervan)	9½ ..	2½
1024	Wheal Tremayne	9½ ..	3 4
92	Wheal Tryphena	140 ..	100
1000	Wheal Vincent	2 ..	7
256	Wheal Vivw (Perranz.)	⅛ ..	⅛
184	Wheal Vyvyan	— ..	60
250	Wheal Williams	28½ ..	8

FOREIGN MINES.

5000	Alten Mining Company	14½ ..	2½
15000	Asturian Mining Co.	15 .	3½ ⅛
20000	Australian	3 ..	5½
10000	Anglo-Mexican Co.	100 ..	¼
12374	Ditto Subscription	25 ..	1½
6000	Barossa Range	1½ ..	1½ ⅛
3000	Bolanos	150 ..	1½
2000	Ditto Scrip	1½ ..	2½ 2½
10000	Brazilian Imperial	23 ..	3½ 4
12000	Cobre Copper Co.	40 ..	24½
10000	Copiapo Mining Co.	14 ..	4 4½
20000	General Mining Ass'n.	20 .	14
4000	Guadalcanal	5 ..	9 10
5000	Kinzigthal Mining Ass.	2 ..	1½
5051	Mexican Company	59½ ..	—
2000	Mexican & South Amer.	8 ..	1 1½
5000	National Brazilian	30 ..	3½ ⅛
104000	N. Brit. Australasian	1 ..	5s 9d
7000	Royal Santiago	10 ..	5½
11000	St. John del Rey	15 10½	11½ 12
43174	United Mexican	Av. 28½ ..	2½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, JUNE 8, 1849.

	per ton.
ENGLISH IRON. *a*	
Bar, bolt, & square, London	£6 0 0
Nail rods	6 15 0
Hoops	7 15 0
Sheets (singles)	8 15 0
Bars, at Cardiff & Newport	5 0—5 5
Refined metal, Wales*	3 15 0
Do. anthracite*	3 15 0
Pigs in Wales	3 10—4 5
Do. do. forge	2 17 6—3 5
Do., No. 1, Clyde ... *net cash*	2 6—2 5
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	3 15 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent Toughened Pigs in Glasgow	2 17 6—3 2 6
Toughened Pigs in Wales	3 10—4 .
Staffordshire bars, at the works	6 10 .
Pigs, in Staffordshire	3 0—3 10
Rails	5 5 0
Chairs	4 0 0
FOREIGN IRON. *b*	
Swedish	11 10—12
CCND	——
PSI	——
Gourieff	——
Archangel	——
FOREIGN STEEL. *c*	
Swedish keg	14 0 0
Ditto faggot	15 0 0
ENGLISH COPPER. *d*	
Sheets, sheathing, & bolts, *p. lb.*	0 0 9
Tough cake	*per ton* 79 10 0
Tile	£78 10 0
Old copper *e*	*per lb.* 7½d—8d
FOREIGN COPPER. *f*	
South American, in bond	——
ENGLISH LEAD. *g*	
Pig	*per ton* 16 0 0
Sheet	16 15—17
Red lead	17 10 0
White ditto	22 0 0
Patent shot	19 10 0
FOREIGN LEAD. *h*	
Spanish, in bond	15 5—15 10
American ditto	——
ENGLISH TIN. *i*	
Block	*per cwt.* 3 13–3 17
Bar	3 14–3 18
Refined	4 4 0
FOREIGN TIN *k*	
Banca, in bond	3 18—4 10
Straits	3 16—4 8
Peruvian (6 mo 2½ p. ct. dis.)	——
TIN-PLATES. *l*	
IC Coke	*per box* 1 6–1 7
IC Charcoal	1 12–1 13
IX ditto	1 17 6
SPELTER. *m*	
Plates, warehoused	*per ton* 14 15–15
Ditto, to arrive	——
ZINC. *n*	
English sheet	*per ton* 24 0 0
QUICKSILVER *o*	*per lb.* 0 2

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

REMARKS.—The market continues dull for all kinds of metals, and the transactions of the last week have been upon a more limited scale than heretofore. Welsh bars must still be quoted at 5*l.*, free on board at the port, but a portion of an old stock is offered at lower rates. Staffordshire hoops, sheets, and nail-rods have been in demand to a moderate extent for India. In Scotch pig-iron there has been very little variation in price, and our quotations must be considered nominal at 43s. 6d. for mixed Nos., and 45s. for No. 1 Gartsherrie and Calder—net cash, free on board at Glasgow. Swedish iron is scarce, and a fair assortment much inquired for.—Of Swedish steel there are buyers at 13*l.* 10s.—no sellers under 14*l.*—Copper was last week reduced 1d. per lb. on sheathing, and 9*l.* per ton on cake and tile.—The price of English tin has again fallen 4*l.* per ton.—Tin-plates are obtainable at 27s. per box IC coke, and 32s. per box charcoal in London, and 1s. per box less at Liverpool.—Lead is in moderate demand at quotations—Spelter is flat, and the price cannot fairly be quoted beyond 15*l.*, although sales were made within the last few days at 15*l.* 5s. The stock in London on the 1st was 2300 tons against 3500 at the same period last year.—Quicksilver is 3s. 2d. per lb. for ordinary quantities.

LIVERPOOL, JUNE 8.—The news by the *Hibernia* is not favourable for the iron market. Scotch pig-iron, No. 1, had declined at 19½ cash; and manufactured iron has also fallen in price; Scotch pigs have not maintained the slight advance, the movement by the Glasgow speculators receiving no support from the trade, who continue to operate with great caution, apprehending lower prices from the rapid diminution of stock and suspension of foreign shipments. Sales were made here to-day at 42s. 6d. per ton for mixed Nos. Other metals are in moderate demand, without any further change in price.

GLASGOW, JUNE 7.—There has been a somewhat better feeling in the pig-iron market this week, and a good amount of business done at a slight advance in price. The price of mixed Nos. may be quoted at 43s. 6d. to 44s. cash.

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL,

FOR THE FIRST FIVE MONTHS OF 1848 AND 1849.

Metals.		1848.	1849.	*In.* or *De.* in 1849.
Spelter	*Tons*	883	1193	310 —
Copper		1586	1988	402 —
Iron, British		9052	11789	2737 —
Ditto, foreign		145	630	485 —
Tin-plates	*Boxes*	1471	2895	1424 —
Lead	*Tons*	213	1201	988 —
Steel		70	372	302 —
Quicksilver	*Bottles*	—	5	5 —

LEAD ORES.

TICKETINGS FOR ABOUT 100 TONS (20 CWTS.) NEWTONARDS LEAD ORE.

Douglas, Isle of Man, June 2.

Bidders.	*Offer per Ton.*
Tamar Smelting Company—Tavistock	£8 5 6
Sims, Willyams, and Co.—Llanelly	9 0 6
Walker, Parker, and Co.—Chester	9 2 0

Ticketings at the Dee Bank Hotel, Holywell, June 7.

Mines.	*Tons.*	*Price per Ton.*	*Purchasers.*
Foxdale	75	£10 3 6	Walker, Parker, & Co.
Cairnsmore	40	8 15 6	ditto
Total tons	115.		

BLACK TIN

Mine.	*Tons.*	*Price.*	*Purchasers.*
Ashburton United	4	£41 0 0	Charlestown Company.

COPPER ORES.

Sampled May 23, and Sold at Andrew's Hotel, Redruth, June 7, 1849.

Mines.	*Tons.*	*Price.*
Carn Brea	120	£6 5 0
ditto	110	7 17 0
ditto	100	3 4 0
ditto	93	4 6 0
ditto	91	3 10 6
ditto	90	5 5 0
ditto	89	5 4 0
ditto	83	4 3 6
ditto	73	7 1 6
ditto	35	1 12 6
Tywarnhayle	100	3 1 0
ditto	83	2 6 0
ditto	68	3 7 0
ditto	46	6 7 6
ditto	35	2 18 0
ditto	19	3 9 0
Nancekuke	41	4 11 0
ditto	20	3 7 6
ditto	8	1 7 0
Par Consols	101	2 9 0
ditto	95	4 7 0
ditto	86	5 5 0
ditto	84	6 6 0
Wh. Tremayne	61	£3 10 0
ditto	45	3 2 0
ditto	33	2 0 6
West Wh. Seton	81	5 10 0
ditto	49	4 10 6
West Wh. Buller	47	6 19 0
ditto	43	3 17 0
ditto	37	5 7 6
Wellington Mines	45	6 9 0
ditto	33	6 7 0
ditto	28	3 4 6
Wh. Rodney	59	1 7 6
ditto	30	1 17 0
Wh. Agar	58	2 4 0
ditto	29	6 6 0
Charlestown United	70	6 6 6
South Wh. Fortune	27	8 12 6
ditto	16	4 14 0
Trenance	16	9 12 6
Francis's ore	12	No offer.
North Godolphin	10	2 13 6
West Providence	9	6 17 0

TOTAL PRODUCE.

Carn Brea	884	£4509 7 0	Wh. Rodney	89	£136 12 6
Tywarnhayle, Nancekuke	420	1448 17 0	Wh. Agar	87	310 6 0
			Charlestown United	70	442 15 0
Par Consols	366	1641 8 0	South Wh. Fortune	43	308 1 6
Wh. Tremayne	139	419 16 6	Trenance	16	154 0 0
West Wh. Seton	130	667 4 6	Francis's ore	12	No offer
West Wh. Buller	127	691 1 6	North Godolphin	10	26 15 0
Wellington Mines	106	590 2 0	West Providence	9	61 13 0

Average Standard ..... £ 90 14 0 | Average Produce 8
Average Price per ton £4 11 0
Quantity of Ore ..... 2496 tons | Quantity of Fine Copper, 201 tons 7 cwts.
Amount of Money £11,407 19 6

LAST SALE.—Average Standard ..... £ 93 1 0.—Average Produce 7¾
Standard of corresponding sale last month, 100*l.* 9s.—Produce, 8¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	33	£101 18 4
Vivian and Sons	462	1850 17 1
Freeman and Co.	751	3206 7 7
P. Grenfell and Sons	317	1306 10 6
Sims, Willyams, and Co.	248	1190 14 6
Williams, Foster, and Co.	509	3005 8 0
Schneider and Co.	176	746 8 6
Total tons	2496	£11,407 19 6

NO SALE on Thursday next, June 14.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devon Great Consols, Wheal Josiah, Wheal Maria, Wheal Fanny, and Wheal Anna Maria 1302—West Caradon 401—Fowey Consols 313—Marke Valley 250—Wheal Friendship 208—Treviskey 129—Bedford United Mines 114—Holmbush 84—Wheal Pink 75—Wheal Bucketts 30—Phœnix Mines 23.—Total, 2929 tons.

COPPER ORES

Sampled May 16, and Sold at Swansea, June 7, 1849.

Mines.	Tons.	Prod.	Price.
Cobre	77	21	£14 4 6
ditto	75	22½	14 19 0
ditto	71	21½	14 3 0
ditto	70	22½	14 14 6
ditto	67	21½	14 5 0
ditto	66	22	14 12 6
ditto	58	22½	14 8 0
ditto	99	13½	8 14 0
ditto	86	13½	8 17 0
Burra Burra	63	28	19 11 0
ditto	62	30½	20 10 0
ditto	51	29½	20 4 0
ditto	49	30½	20 10 0
ditto	12	23½	15 12 0
ditto	52	28½	19 8 0
ditto	50	27½	18 4 6
ditto	48	29½	19 12 0
ditto	47	27½	18 13 6
ditto	40	29½	19 13 0
Berehaven	126	10½	£6 17 6
ditto	118	10½	6 15 0
ditto	104	10½	6 12 6
Burra Burra	70	30	20 9 6
ditto	66	33½	22 10 6
ditto	40	30½	20 17 6
ditto	18	30½	20 7 6
ditto	62	30½	20 10 6
ditto	35	33	22 1 0
Burra Burra	65	31	20 13 0
ditto	62	31	21 1 0
ditto	60	29½	19 12 6
ditto	4	30½	19 9 6
ditto	33	30½	20 14 6
ditto	13	31	21 5 0
Knockmahon	107	10½	6 15 6
ditto	45	11½	7 6 0
Ballymurtagh	57	4½	2 11 0
ditto	44	6½

SCHOOL OF MINERALOGY, CHEMISTRY, AND GENERAL SCIENCE.

MESSRS. NESBIT'S ACADEMY, 33

No. 39, KENNINGTON-LANE, LAMBETH, NEAR LONDON.

In this SCHOOL, in addition to all the branches of a good education, EVERY FACILITY is AFFORDED for obtaining a knowledge of ANALYTICAL CHEMISTRY and NATURAL SCIENCE, as applied to the Arts, Manufactures, and Agriculture.

The pupils are practically taught in the Laboratories, which are fitted up with every essential for the most extensive chemical investigations.

Mr. Nesbit's works on Land Surveying, Mensuration, Gauging, Arithmetic, English Parsing, &c., may be had of all booksellers.

References.—Dr. D. B. Reid, F.R.S.E., &c., House of Commons, Westminster; R. Prosser Esq., C.E., Birmingham; J. L. Bullock, Esq., Editor of *Fresenius's Chemical Analysis*, Conduit-street, Regent-street; J. Gardner, Esq., M.D., Editor of *Liebig's Letters*, &c., Mortimer-street, Portland-place; and W. Shaw, Esq., Strand, London.

WARRANTED SAFETY FUSE.—W. BRUNTON & CO.

beg to inform Mine Agents, Contractors, and Merchants, that having completed their Machinery for the MANUFACTURE of the ABOVE ARTICLE, they are enabled to offer FUSE of a very superior quality, and at considerably reduced prices.

W. B. & Co. can SUPPLY FUSE in ANY LENGTHS that may be required.

Penhellick Fuse Factory, Pool, Truro, Cornwall. 34

TESTIMONIALS.

We, the undersigned, hereby bear our testimony to the excellence of the Safety Fuse, manufactured by Messrs. Brunton and Co. We have had it in use in our mines; and, after sufficient trial, find it to be fully equal to any Fuse we have ever used:—

Carn Brea Mine.
R. H. Pike, Purer.
John Leuten, James Miners, John Vivian, John James, } Agents.

North Pool Agents.
James Evans.
John Nancarrow.
Frederic Evans.

South Roskear Agents.
John Dunkin.
William Thomas.

Cook's Kitchen Agents.
Joseph Vivian.
Richard Bennetts.

Cook's Kitchen Agents.
John Ivey.
William Hitchens.

North Roskear Agents.
Joseph Vivian.
William Michell.
William Thomas.

Tincroft Agents.
Peter Floyd.
Thomas Stainsby.
Thomas Lean.
Henry Hocken.
Richard Martin.

William Nancarrow.
Alex. Eudey, Joseph Eudey, } *Wheal Agar Agents.*

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1766 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £4 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 35

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

ABERGWESSIN MINES.—With reference to the quotation of shares in this undertaking, we have been requested by Mr. Couch, the purser, to state that the last transfer was made to Mr. Vaughan Prance, of Nether Stowey, near Bridgewater, of 10 shares, at 10*l.* each; and that no shares have changed hands at a lower price.

THE COST-BOOK SYSTEM.—"J. B." (Vauxhall) inquires—"Can the Cost-book Principle be made available to undertakings carried on by subscribed capital, in the counties of Devon and Cornwall, *other* than *mining* operations, such, for instance, as smelting iron ore, or iron-works in more general detail?"—We repeat, for the hundredth time, that the Cost-book System is only recognised by law in the Stannaries Court—a court solely established for deciding controversies, and administering justice to parties engaged in mining operations, in Devon and Cornwall. We apprehend that any manufactures, or chemical, or mechanical operations, carried on under the really true and original Cost-book System, by parties subscribing their capital for the purpose, would be carried out successfully, or fail with only a slight loss—for this reason, that, although we suppose there is no law to recognise it under such circumstances, the very fact of clearing off all liabilities every two months would keep them out of any danger from the laws affecting joint-stock companies. The original Cost-book System has, however, been so abused, so twisted, and turned, and perverted from its own simple and intrinsic originality, to suit individual cases, that we really, except in a few cases, know not where to recognise it.

"G. B." (Coventry).—Bromine was first discovered, in 1826, by M. Balard, of Montpellier: it exists in sea-water, in the state of bromide of sodium, or bromide of magnesium, but in very small quantities, and occasionally in several mineral springs. At common temperature it is liquid—dark red by reflected, hyacinth red by transmitted light; its odour is strong and unpleasant, its taste acrid. At 116° Fahr. it boils; between 0° Fahr. and 4° it congeals. It acts powerfully on animal substances, and is extremely poisonous. It is extensively used in the Daguerreotype process.

"Three per Cent." (Ragland, Monmouth).—In July, 1834, the bullion in the Bank of England was 8,659,000*l.*, while the securities were 27,593,000*l.*—making a total of 36,252,000*l.*; the circulation at the same time was 33,991,000*l.* During the last 20 years (if ever) the bullion deposited in the bank has never been as much as 19,000,000*l.*

"Z." (Sunderland).—We have submitted your query to a practical surveyor (Mr. C. S. Richardson, of Whitefriars), and have been favoured with the following reply:—"In drawing a section to delineate the strata, or a mineral vein or lode, it should always be shown transverse to its bearing—thus, east and west lodes are shown in a north and south section; and to show that the surface line of the profile corresponds with the plan, or map, we think it best always, where it is practicable, to place it immediately beneath it; this section, then, would be looking west or east, according to the position of the plan. It is usual (although not essentially necessary) to have the meridian vertical with the plan; a north and south lode would then, when shown in an east and west section, be seen looking north, which is certainly the best manner of plotting it. When sections are taken longitudinally, for the purpose of showing the extent of ore ground stoped away, or for computing and valuing the quantity in sight, some surveyors make it a rule to show the section as looking on the back of its underlay; but as each have their own peculiar methods, no general rule can be said to exist."

"An Enquirer" (Truro).—The best method of proceeding to the Hartz is *viâ* Hamburgh; from thence there is a steamer to Harburg, on the Hanoverian coast. The railroad from here takes you through Hanover, Brunswick, to Hartzburg, which is at the foot of the Hartz mountains. About 10 miles from this is Clausthal, which is the residence of the director of the mines. By applying to him, you can obtain permission to visit any of the mines or smelting establishments. The School of Mines is well worthy of a visit; here is deposited models of the several mines, together with the different machinery with which they are worked. No letters of introduction are necessary, nor is there any difficulty in obtaining any explanations you may require.

"J. C.," C.E. (Over Darwen).—The Britannia-bridge will be fixed between the 19th and 22d instant. The definite day cannot be positively stated, as it depends entirely upon the state of the tide.

"G. F. L." (Cornhill).—The process of copper refining takes from 19 to 20 hours. A charge of about 5 tons of black copper is put into the furnace; this, in general, is allowed to roast for about five hours; the door is then well luted with clay, and a strong heat is got up, so that the mass may be fused; when it is all run down, the doors are opened, and the slag which is on the surface is skimmed off. The metal is then allowed to set, and the heat is decreased; in this state it remains for about seven hours: it is then again melted, and any fresh slag coming to the surface is again skimmed off. After this a trial is taken out in a ladle—this is allowed to cool; if no black spots appear, or the copper does not rise in the ladle, it is technically called "set." The refiner then places on a paddle a piece of lead, varying, according to judgment, from 10 to 20 lbs., in order that the lead may oxidise any particles of iron or other impurities which may remain in the metal. The surface of the copper is then covered with charcoal—from time to time birch poles are placed in the copper, in order that it may absorb the pyroligneous acid which they contain. The refiner then takes a small assay, which he breaks and subjects to the hammer; by this he determines whether more charcoal or poling is required. When the metal has been raised to its proper pitch, which he judges by the several assays he has taken, he orders the men to ladle out; this is performed by three men, who follow each other in quick succession; three ladles make a plate, and it is requisite that no intermission should take place, as a cold set would occur, which would spoil the plate. The ladles are in general coated with a mixture of horse-dung and fire-clay.

"Cornubiensis."—We think the circumstance alluded to, the date being 1845, must have taken place before Mr. W. J. Henwood went out to Brazil. A shareholder ought, however, to be better acquainted with the subject than ourselves.

"J. B." (Kiel).—Ransome's artificial stone is thus prepared:—Broken pieces of silica (common flint) are subjected for a time to the action of caustic alkali, boiling under pressure in a close vessel; this forms a transparent silicated solution, which evaporates to a specific gravity of 1·600; it is then intimately mixed with given portions of well-washed sand, broken granite, or other materials of different degrees of hardness. The paste thus constituted, after being pressed into moulds, from which the most delicate impressions are readily received, is subjected to a red heat, in a stove or kiln, by which operation the free, or uncombined, silica of the raw materials unite with the excess of alkali existing in the solution, thus forming a semi-vitreous compound, and rendering the artificial stone perfectly insoluble. This production is adapted to a very comprehensive range of objects for decorative art and architectural purposes; it is not only confined to these, but is used for inferior articles, as grindstones and whetstones for scythes. The manufactory is at Ipswich.

"Miner" (Camborne).—All mines in Germany, whether belonging to the State or private individuals, are under the control of the mining officers appointed by the Government. Each proprietary is bound to keep a diary of the proceedings at the mine, with a full description of the geological and mineralogical changes which have occurred in the several workings. To sink new shafts, or drive fresh levels, the consent of the bergmeister, or the geschworner, is requisite. A draft of the mine is likewise kept in the office, to which the several superintendents add monthly the progress that has been made. A yearly report of the expenditure, and prospects of the mine, must be transmitted to the College of Mines.

"E. O." (City) writes—"I wish to enquire the value of shares in the Wheal Emily Silver-Lead Mine, in the parish of Wemsbury, near Plymouth; a level has been driven 12 fms. in depth, and a course of silver-lead ores opened upon for a considerable length; the assays taken give the produce of silver at 45, 80, and 110 ozs. to the ton; 20 men could work on tribute, at the rate of 3*s.* in 1*l.*, and 2*s.* more, it is calculated, would be the dressing charges. A winze has been sunk under this (12 fm. level), and a branch of solid lead ores, about 24 fms. in length, and 1 foot wide opened; the assay of this is 376 ozs. of silver to the ton. A deep adit has been driven 355 fms. in length to cut the lode at 35 fms. in depth, which is now within a short distance of accomplishing this object, and a shaft has been sunk 17 fms. to give facilities, and it is intended to continue down to the 35 fm. adit. At the mouth of the adit a vessel of 200 tons may anchor with perfect safety." [We invariably make it a rule never to advise respecting any particular mining investments; the course we recommend, is to apply to some respectable mine agent. The addresses of several appear in our advertising columns weekly.]

*** It is particularly requested that all communications may be addressed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JUNE 9, 1849.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

If any further proof were wanting of the care and solicitude with which the colonies of England, and especially the Australian colonies, are regarded by her Majesty's Government, it would be found in the fact of the introduction of a bill, a few days since, conferring upon them such representative, legislative, and executive powers, as render them, not separate and independent, but, in the large sense of the expression, self-governing states. So satisfactory has been the working of those elements of Government conferred on the colony of New South Wales a few years since, that on being applied to for an expression of its views as to any alteration or improvement of its institutions, the answer returned was to the effect, that no change was desirable. It was thought, therefore, that as unexceptionable a course as could be taken was, varying as little as possible from the scheme of political incorporation which had wrought so well in the elder colony, to extend the same privileges and institutions to the affiliated colonies of the great south-western district.

In pursuance of these views, it is purposed by the bill to sever the improving dependency of Port Philip from New South Wales, and to erect it into a separate state, with powers to regulate and administer its own affairs by means of a legislative assembly, two-thirds of whose members are to be elected by the qualified population of the colony, and one-third by the appointment of the Crown. This infant colony receiving at the baptismal font—that is, in the enacting clauses of the bill—the august name of *Victoria*; South Australia, Western Australia (conditionally), and New Zealand receiving, by the same creating statute, the honours of separate and mutually independent political government and civil institutions, except in so far as they may be modified by the controlling power of a General Assembly of all the states together. But for a clearer understanding of the leading principles and particular provisions of the measure, we refer our readers to the luminous and concise statement of the Under Secretary for the Colonies, on moving for leave to introduce the bill. Enough is apparent, even from the comparatively faint portraiture of the measure here given, to show that it is conceived in a spirit of the largest liberality, and that it will reflect permanent honour upon the Government, and especially the colonial department of it, by whom it was framed and purposed to Parliament. But what is of much greater importance is, that with other measures recently completed, it is likely, under Providence, to contribute most efficiently to the happiness and material prosperity of the colonies themselves.

From time to time in our columns we have pointed out the necessity of the mining interest of Cornwall taking some decided steps to protect themselves from the grasping and unfair monopoly exercised, to their detriment, by the smelters; at the same time, we have urged on this body the propriety of deviating from their present expensive method of working, and availing themselves of some of the new improvements which have lately been introduced in the art of smelting. We are aware that many of these improvements have not been practically tested, and that experiments which may give good and correct results in a laboratory, very often, if attempted on a large scale in a furnace, are, owing to their cost, practically useless. The knowledge of this has, no doubt, induced many of the Swansea smelters to pause before they commenced any radical change, which, perhaps, would only lead to a dubious good, and uncertain result. In the month of August last a prospectus appeared in our columns for the formation of a British Copper Smelting Company, which proposed to smelt at a lower rate than at present, and to avail themselves of the new improvements that should offer themselves. We regret that this enterprise has not progressed so favourably as its merits would appear to deserve. We are unable to say whether this has arisen from the difficulty of obtaining capital, or whether it is another proof of that apathetical feeling which our mining interest has generally shown whenever the important question of asserting their own independence has been mooted. So many letters on the subject, however, have at different times appeared in our columns, that we feel any arguments that we could adduce would merely be a repetition of facts already advanced; and although we might considerably add to the mass of matter which it already comprises, it would only have the effect of tiring the patience of our readers, without in any way benefitting the cause of those who seem so unwilling to make any efforts for their own amelioration or preservation. Unwilling as we are to renew this hackneyed subject, we feel that we should be wanting in our duty to the mining interest if we did not call their attention to a few facts which have lately come to our knowledge, from sources on which we can confidently rely. It may be in the recollection of most of our readers, that one of the patents for improvements in copper smelting is known by the name of "Napier's." This has been some time in practical operation; by it the processes are much shortened, and the slag obtained from the ore never contains more than 1-16th per cent.; while by the present method at Swansea the ore has to pass through seven alternate calcinations and fusions, and the slag is supposed to contain from ½ to ¼ per cent. This process is now being introduced by Messrs. Schneider and Co. in South Australia. They have commenced erecting works, calculated to smelt 10,000 tons, at the Burra Burra Mines, and there is every hope that the next advices from the colony will inform us of the successful result of their operations; and there is no doubt, that as soon as the fact of profitable smelting-works being carried out in the colony is established, not only will they extend their plant, but that other adventurers will likewise erect establishments for the reduction of the several ores in which the colony abounds. The fuel used by them is coal, and it is calculated by the time it reaches the works it will cost 3*l.* per ton; the price at Swansea is about 5*s.* for the same quantity. Dr. Davy has likewise patented in the colony an invention for smelting copper ores; this, we believe, is an improvement on a furnace constructed some years since by Mr. Troughton; it is of a cupola form, with different rows of iron bars, or grates, and is to be worked by the blast. However this may answer on a small scale, we question much whether it can be profitably carried out in any extensive operations; we shall, however, be glad to see that our anticipations are incorrect. We reported, some time since, that two brothers, of the name of Thomas, had likewise produced a small quantity of fine copper. Though this cannot be considered commercially of any great importance, it establishes the fact, that there is no difficulty in smelting the ores on the spot. It may be argued that difficulties will be encountered in smelting any particular ores alone; and there is no doubt that the fusion of several qualities and of different natures, render the operation less tedious, and productive of more certain results. From information published in our last number, it will be seen that the assayers have discovered the Burra Burra ore cannot be smelted to advantage by itself; they have, therefore, tried other ores, and have found one which will answer—the "Reedy Creek." Although we place all due credence to the opinions of the assayers, we should have had greater confidence if their report had been confirmed by the evidence of the practical smelters in the colony. Carbonates, we are aware, by the usual process, cannot be smelted advantageously alone. Napier's patent is more especially directed to their reduction. It has been most successfully carried out in England, and we see no reason that it should fail in South Australia. In all new establishments, failures in general take place before a successful result is obtained. The Alten Company, possessing but one kind of ore, and that containing great quantities of iron pyrites and sulphur, in a matrix of quartz, were three years before they smelted successfully. By careful experiments, to ascertain a chemical knowledge of their ores, and the proper materials to form their bottoms, they were enabled to overcome all difficulties, and have been prosperously smelting from that period to the present time. We do not apprehend, with the present improved methods of smelting, that the Australian adventurers will have to encounter the difficulties which beset the Alten Company at their outset. Their staff has been formed most carefully, containing some very efficient members of the smelting profession; and, from their talent and labours, we cannot but augur a prosperous issue. We make no comments on the effects which this will have on the copper trade in England, but we leave it to the consideration of the home mining interest, if after seeing the establishment of smelting-works on the Swansea principle abroad, and the rapid strides which the colonial miner is making successfully to emancipate himself from the trammels of the smelting monopoly, it does not become them, by a vigorous effort, to take such energetic steps, as not only will enable them to act independent of the chain which has so long enthralled them, but successfully to compete with that foreign and colonial rivalry, which, if as energetically carried out as courageously began, must eventually, if not entirely, engulph them, and inflict so severe a blow on our home mining, already depressed, that it is questionable whether it will ever recover its pristine vigour. The mining interest of England has justly and deservedly been counted the most energetic of the European race; untrammelled by the vexatious interference of Government officials, private enterprise and individual speculation have raised it to its present high position. From foreigners we may be secure, but it is from our colonists, members of the same indomitable race, possessed of the same undaunted perseverance and untiring energy, that we have to fear our most formidable rivalry, sooner or later, though the day may be far distant. These remote possessions of the British empire will, in the ordinary course of changes, become independent of the mother country. We gladly view the increasing prosperity of the colonies, and hope that their progression will be steady and sure; but, at the same time, we must impress on those at home the necessity of preceding, not following, the emigrant in the march of civilisation and industry. The Australian miner is now in advance of his Cornish brother; the latter has still time to recover the ground he has lost; but this can only be done by an effective co-operation of both interests, and the introduction of such improvements in the management of our smelting establishments, as will allow them, at the same time they give a fairer price to the miner (enabling him, with the poor home ores, to compete successfully with the rich foreign), to effect such economical reductions in the smelting processes, as still to give them the pre-eminence over their rivals. We should think, with the superior labour they command, and the cheap fuel and materials, this would not be difficult, though, at the same time, they must be content with less profits than they have been accustomed to receive.

ON PYROGEN.—No. VIII.

BY JOHN JOSEPH LAKE, ROYAL LABORATORY, GOSPORT.

The existence of pyrogen affords a satisfactory explanation of the cause of many electrical phenomena—for instance, the change in the electrical condition of some substances under pressure—a result naturally produced by the closing of their pores, causing the pyrogen to be expressed from them. In the case of air, this ejectment of pyrogen becomes visible—light being developed when the compression takes place with sufficient suddenness. Thus, it would appear that the light developed in these cases has the same origin, which agrees in some respects with M. Biot's theory, though the manner in which he supposed the effect to be produced is altogether different from the reality—his opinion being that in both instances the light was the result of compression, in the one of the air, and in the other of the more solid substances. It was objected to his theory, that the light is also produced in *vacuo*; and though he replied that there was not such a thing as a perfect vaccum, his arguments are not conclusive. Now, however, the objection cannot apply; for pyrogen, being matter, can develope itself as well in *vacuo* as under another condition.

Heat produces electrical disturbances, expelling pyrogen from iron and nickel, and depriving them of their magnetic properties. If a quantity of coffee be placed in a percolator, over the sieve, or colander, leaving enough space for the particles freely to move, after the boiling water has drained through, they will be found to have collected towards the edges, rising gradually in a slope, from a point in the centre, from which they appear to have been driven. This is similar to an electric effect that may be observed during the grinding of coffee; if caught in a cup, on falling from the mill, the lighter particles will be found to fly from the centre of the cup, and arrange themselves up the sides, the heavier ones descending to the bottom. In iron pyrites, there is every appearance of the operation of a similar force, a system of crystallisation being observable, radiating from the centre. Cast-iron shot, when broken, have the same appearance.

These facts appear to disclose the mode in which heat acts upon matter in causing a separation of its particles. First, it expels the pyrogen, as shown in the case of heated metals; this will carry along with any light and moveable particles of matter, as seen in the case of the coffee falling from the mill, which operation is more completely developed when the particles are made to float, as in the percolater, whilst the crystalline forms assumed by iron pyrites and iron shot radiating from the centre, go to show that the operation of the law is general, as far, at least, as conducting substances are concerned. The case of non-conductors becoming conductors or magnetic by the application of heat, seems at first sight to be opposed to these conclusions; but a little consideration will show that it is not so in reality, for the non-conducting properties of particular substances are owing to their peculiar molecular condition, for when reduced to powder they become conductors, and pyrogen passes readily by them. Heat also produces molecular change; for, as already stated, with the metals the action is the closing of their pores, and the expulsion of the fluid, whilst with some crystals and non-conducting substances the opposite effect seems to take place, and such a change is produced, that pyrogen is admitted into their substance, and can be transmitted by it.

As heat produces electrical disturbance, so electrical disturbance produces heat; and as the centre of heat is the point of greatest molecular disturbance where the particles of matter find the least repose, so the point at which the electrical disturbance originates is that from which the heat developed proceeds. The following experiments by Messrs. Pollock, Gann, and Mackrell afford a clear proof of this:—A solution of 1 part sulphuric acid and 10 parts distilled water being poured into a glass tube, having its two extremities bent upwards, the battery current was completed by bringing the terminal wires into the solution, one wire being inserted at each end of the tube; the liquid became quickly in a state of ebullition, commencing at the negative and proceeding to the positive end, which direction was invariable whichever terminal wire was first brought into the solution. Again; an Eau-de-Cologne box, pitched inside, having two cards placed transversely as diaphragms was employed. A thermometer, standing at 59°, was placed in the positive cell, and another standing at 58° in the negative. The connection being made with the battery through these cells, and continued for 10 min., the thermometer in the positive cell stood at 65° and the negative at 68°, the former having risen 6° and the latter 10° (*Proceedings of London Electrical Society*, 1841-2, p. 6).

It will, therefore, seem, according to the principles developed in these papers, that heat is a property of pyrogen, and is produced when that substance is placed in a particular state—that is, during chemical decomposition, or change, which it is either set free altogether, as in the galvanic battery, or is in course of absorption from substances holding it in solution, or in their composition, as during the burning of fires and candles. The facts observed, in respect to the heat of the sun, do not oppose this, for it is very probable that its heat, as well as its light, results from the vast mass of pyrogen in constant and rapid circulation about it; and there are facts that render it not altogether certain that the rays of the sun are essentially warm, although warmth is elicited by their contact with matter. It would rather seem that the warmth of the sun is the result of molecular, chemical, or electric change produced by it, which is an opinion, whether correct or not, that accounts for many facts that we witness daily—*e. g.*, the extinguishing of fires by it. Heat applied to a fire tends to make it burn better, and renders the combustion more complete; it certainly never extinguishes it. But the sun's rays actually impede and prevent combustion, stopping a chemical and electric process.

Errata in last paper: Line 41, for "pyrites of iron," &c., and line 70, for "pyrite of iron," read "pyrate of iron."

According to official returns just received from Russia of the total quantity of gold collected in the year 1848, from the Government factories and the private workings in east and west Siberia, it appears that the amount fell rather short of the produce of the preceding year. In 1848 it was 1724 poods, while in 1847 it was 1768 poods.

Letters have been received from Sidney to the 15th February. The gold discoveries at Port Phillip are alluded to, and in such manner as to lead to a belief in the accuracy of the first reports, the auriferous deposit extending, it is alleged, over a large surface of ground, and yielding a very pure metal.

NORTH BRITISH AUSTRALASIAN COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In your last week's *Journal*, I observe among the arrivals of foreign ores a parcel from the Kaw-aw Mines, which is said to contain 16 per cent. of copper. This appears to be a sort of regules, which has been run down without calcination. From a sample which I saw, the operation appeared to have been very carelessly and wastefully performed. All ores containing quantities of sulphur require, previous to fusion, to be well calcined; if this is not done, they destroy the furnace in which they are smelted, a great proportion of the copper is inevitably lost, and the slags must always contain a large quantity of metal, to obtain which it will be requisite to smelt them over again. The sample of regulus from Kaw-aw, from its appearances, contains yet a great quantity of sulphur and iron, the latter, indeed, predominates so much, that the oxide can plainly be seen on the surface—in fact, it has the appearance of a mass of rusty iron. Some years since a notice appeared in your Journal, stating that a portion of raw ores shipped from these mines had ignited on the passage home, and the captain was forced to unload his cargo for the safety of the vessel. At that period I communicated to you the method of cheap calcination adopted in Norway, and which would effectually prevent the recurrence of such accidents; as this may have escaped the notice of your readers, I have thought it might be of interest to those concerned to be informed of it. A square or round kiln of dry stones, about 4 feet high, and from 12 feet to 14 feet each way, with apertures about 18 in. square at the base, about 3 feet distance from each other is built; about 2 fms. of wood are laid on the bottom, the ore in the state of spalled stuff (about the size of hen's eggs) is laid on this till it reaches about 2 ft. above the surface of the kiln; it is then ignited, and when well lit covered with smalls. One of these kilns will hold about 150 tons of stuff; they in general burn for about three weeks; a labourer usually attends them, who, from time to time, as the smalls on the surface cake, break the clods, in order to keep up an equal calcination, and prevent in some part of the mass an unequal fusion. If there should happen to be too great a draught, which must depend on the judgment of the calciner man, one or more of the air-holes must be stopped up. One labourer can attend to 10 or 12 of these kilns; they in general burn for about a fortnight or three weeks; when cool one of the sides of the kiln is taken down, and the ore wheeled to pile. If the operation has been carefully performed the ore will be found to be of a reddish brown colour, excessively friable, but in no degree fused, which causes a decrepitation of the copper. Ores from 6 to 8 per cent, when calcined in this manner, if subsequently run through a reverberatory furnace, will produce a regulus of from 40 to 45 per cent. The regulus once obtained, if there be fuel in the neighbourhood, the subsequent reductions are comparatively easy, and a small mine with four reverberatory furnaces might easily produce cake copper. I need not point out to you the saving in freight, &c., which the North British Australasian Company would obtain, if their regulus was of the per centage of 40 instead of 16 per cent.

As they are now able to make regulus, though of an inferior quality, I think they should seriously consider whether it would not be more profitable for them to increase the value of their property by carrying out the ulterior operations. This, however, must depend on the prospects of the mines, the supply of ores, and the proximity of fuel. About £8 is the cost in Norway of calcining 150 tons of ore, and in that state it is fit either for shipment or smelting. I have no doubt that this process would have been practiced in England; but the vapours which arise from the ores are destructive to vegetation; and where there is good land would do some damage. I do not, however, suppose that this would be any objection to its introduction at Kaw-aw, as the land, I should imagine, is the property of the company. In forwarding this I shall be happy at any time, through the medium of your columns, to give any further information on this subject which may be required.

Strand, June 7. DELTA.

THE EXPLOSION AT TRESCOLL MINE.

SIR,—In your last week's Journal, a letter appears bearing the name of C. S. Richardson, in which reference is made to an insinuation, or "rumour," as he calls it, that the accident at this mine was anticipated, emanated from his office, and had been the subject of conversation there for the last six months, and that it was well known to the purser and managing committee of the company. Now, you will see, Mr. Editor, what Mr. Richardson knows, even at this moment, about Wheal Trescoll boiler explosion; it may be he does not understand the difference between a boiler and the tube. For his information, we beg to tell him it was an explosion of the latter, and not the boiler; and that the accident, which, from its results, we regret as much as himself, was unforeseen and unexpected by all; and that at the very time the accident occurred, the engineer at the mine was standing on the boiler, who, it is fair to suppose, would not have placed himself in that position if any weight had been attached to the "rumour" of Mr. Richardson.

THOMAS BUTT. WILLIAM BEARD. } Committee of Management Wheal
WILLIAM DENNEY. JOHN MAYHEW. } Trescoll Mining Company.

Kelvedon, June 6.

STAMPS ON TRANSFER OF SHARES—THE COST-BOOK SYSTEM.

SIR,—When I ventured to suggest, in a late Number of your Journal, what I conceived might be taken as a test for determining, in the absence of decision, whether stamps were requisite on the transfer of shares in mines worked on the Cost-book Principle, it never occurred to me that there was at this enlightened period any individual so dunderpated as to suppose that my motives in addressing you would affect the question at issue. I had looked upon it as one of some importance to a considerable body of persons; and I thought you had in your observations treated it too much as one of general policy—hence it was that I used the phrase of the question being "a legal one," which you have since remarked upon, without adverting to the circumstance that that may not be the less correct definition, because something else may come within the same category.

I had hoped to have found amongst your readers some one who had and might be disposed to unlock his stores of information for general use, and behold "W. X. Y." starts forward, and questions whether I ever held a share in a mine, or was an adventurer; then politely adding (for some inconceivable reason of his own) that then I stultify myself. This was asking for bread, and getting a stone, with a vengeance, but further comment on such a writer would be a waste of time and valuable space.

I am more fortunate in having elicited some additional observations from you, and I yet rely that, through your aid, the question may be placed upon a safe footing for all parties who are interested in its determination, and without any unfortunate adventurer having to undergo the loss and trouble consequent upon a defence, at the suit of the Crown, for penalties. With this object, I would then remark that the case you refer to, of Fox *v.* Wyld, only tends to show that the cost-book itself was not receivable in evidence, without the sheet or part relied on being stamped with an agreement stamp. That, I am afraid, decides nothing material to the point at issue, but rather proves that the cost-book principle is not altogether exempted from stamp duty, for I do not understand it to have been contended that the notice from the Inland Revenue Office was held to apply to transfers in the cost-book by the purser, or that the full consideration paid for the same had to be "truly expressed therein;" but that it did apply to the usual form of transfer executed by the seller and purchaser, and which is the purser's authority for making the transfer in the cost-book. I have heard nothing to change the opinion I expressed, that the transfer executed by the parties themselves would, *inter se*, be treated as an agreement only; in which case, if the consideration paid were under 20*l.*, it would not require stamping, but if it amounted to that sum, then a stamp would be necessary; an interest in mines not coming, as I have before stated, within the exception "as of, or relating to the sale of, any goods, wares, or merchandise."

Looking at the subject in this way, I would then throw out for the consideration of some of your readers (better informed than your "Temple" correspondent) whether an alteration might not be safely made in the forms of transfer now in general use, so as to get rid of the doubt and uncertainty attaching to them, as requiring to have the consideration expressed therein. For instance, if the effectual transfer of interest in the shares is that made in the book by the purser, what occasion is there for the seller to do more than to sign a written authority for the purser to make the transfer, and for the purchaser to sign a similar authority that he would hold the shares, when transferred, upon the terms and conditions contained in the cost-book, and be concluded thereby, and let him afterwards sign it? I must own, if I were to be sued for penalties, after the late notice from Government, that I should like some better defence to be made for me than what was to be derived from the alleged practice in the Stannaries Courts, the jurisdiction of which is, as you remark, confined to Cornwall and Devon. It may do very well to rely upon that practice in matters brought before those courts, but heaven help the wight who would seriously intend setting it up as a substantial defence against her Majesty's Attorney-General in her Court of Exchequer. The Cost-book Principle is, as you have stated, recognised in the Act for the registration, incorporation, and regulation of joint-stock companies, and exempts such companies, or partnerships, which are carried on under it from the provisions of that Act.

From your last remarks, I gather that you deem this "principle" cannot prevail elsewhere than in these two counties, and it is inapplicable to aught but companies formed for working mines of tin and copper. Is there any authority for this position, or why on principle should lead or other minerals be excluded, and why should the shareholders in mines in Wales or Ireland be debarred from its use? I can understand why they do not enjoy the advantages arising from a local jurisdiction, constituted as these Stannaries Courts are, but not that a working principle must needs be confined within such narrow boundaries. Statute may, but usage or custom I submit cannot control the applicability of a principle or mode of carrying on mining in partnership in any district whatever. The statute referred to, most certainly does not circumscribe its locality or its applicability to any particular partnership undertaking. I am a holder of shares, amongst others, in a lead mine in Wales, professedly conducted on the Cost-book Principle, and, although we number amongst our adventurers more than one astute solicitor, I have never heard any doubt as yet expressed as to the correctness of our proceedings in that particular. I should certainly hesitate, in the present state of incertitude, to execute the usual form of transfer without having inserted in it the full consideration paid, deeming it to be the lesser evil to pay a duty unnecessarily, than to be subject to be sued for penalties where the proof was in the hands of a needy or adverse person.—W. H. G.: *June 8.*

ACCIDENTS IN MINES.—In the House of Commons, on Wednesday evening, Mr. Aglionby, in the absence of Mr. T. Duncombe, moved for leave to bring in a Bill to provide for the better ventilation of mines and collieries, for the protection of the lives of the persons employed in and about the same, and to make other provisions relating thereto. The hon. gentleman stated that the Bill was similar to one formerly introduced by the hon. Member for Finsbury, but which circumstances had prevented him from proceeding with. Leave was given.

NEW LOCOMOTIVE FOR COMMON ROADS.

Anxious to advance to the utmost of our ability the successful application of steam locomotion on our turnpike roads, we readily give insertion to the substance of a communication from a correspondent at Tavistock, partially describing a common road locomotive on the high-pressure condensing principle, from which, if there is no error or miscalculation in the results, we must almost believe the system successfully matured. This engine, we are informed, is of 9-horse power; while in proportion it is the lightest ever made, weighing altogether but 30 cwts., consequently not much heavier than an omnibus. The boiler is on an entirely new construction, weighing only 8 cwts. There are two cylinders 4½ in. diameter, and the great advantage in its light weight is obtained by the use of an entirely new condensing apparatus, without which our informant believes no locomotive can succeed on common roads, in consequence of its own weight. By this apparatus, which consists of a great number of small tubes, arranged in various directions, the steam will be completely condensed to a vacuum, by which it is calculated that there is a gain of 28 lbs. on the inch, at a speed of only 15 miles per hour, above the power of the locomotive now in use, and the principle can be applied to every description of engine. The advantages claimed by the inventor, who is about securing a patent, are—a saving of 50 per cent. in fuel in railway locomotives; no tender required, and, consequently, the propelling its weight and 50 tons of water avoided; returning the condensed steam to the boiler, without taking power from the engine; the enormous resistance of the atmosphere acting on the steam passing off from the funnel when at high velocities avoided; expense of water stations saved, the boiler once filled lasting some hundreds of miles; greater safety; the disagreeable puffing noise done away with; boilers will not corrode so soon, and, consequently, not require so often cleansing.

For marine purposes the advantages are great. With three hogsheads of pure water a steam-vessel could cross the Atlantic, avoiding the use of salt water, so injurious to the boilers; all the stowage for fuel saved for more passengers or freight; smaller engines, in all cases, will do the same work. In stationary engines for mines, &c., 50 per cent. will be saved in fuel, and more work accomplished—the expense of pumps for raising condensed water saved. In mines the same size engine will admit of the shaft being sunk deeper under the adit, in consequence of so much condensing water being required to be lifted from adit with the present engines. Mines where engines are required can be worked at much less cost. We are informed that the inventor is a poor man, and has been under great difficulties in the construction of his present carriage, which is stated to perform exceedingly well. If he has succeeded to the extent described, we have no doubt he will find friends to back him, and public interest and patronage will eventually reward his labour.

COMPRESSED-AIR LOCOMOTIVE FOR RAILWAYS.

Our attention has been called to a *new (?)* system, as it is termed, of atmospheric propulsion by compressed air, proposed by Mr. Fell, engineer, and which is said to be supported by Mr. Sergeant Halcombe, F.R.S., and other gentlemen, as a provisional committee; and we have been informed that shares are already making the round of the Stock Exchange. A model has been laid down at Frost's rope-ground, Shadwell, with which, says the prospectus, "a most successful series of experiments on a working scale have taken place." The following is a general description:—Along the whole length of the line, between the rails, is laid a pipe of cast-iron, fitted with air vessels, with a cock or valve at every 22 ft., being the exact length of the circumferance of the driving wheels, forming an air-tight surface, with what is termed a slipper valve attached to the locomotive. A feed-pipe from each air vessel conveys the air to the slipper valve. In this pipe is an air cock, to be acted on by a lever bar attached to the locomotive. In this locomotive are two cylinders and pistons, acting on the driving-wheels as usual, but worked by compressed air instead of steam. At every revolution of the wheels the lever opens the valve in the feed-pipe, the compressed air rushes into a receiver, and works the air-engines propelling the locomotive. The slipper-valve is about 22 ft. long, reaching from one air-vessel to another, is suspended from the locomotive, and contains a number of small valves from one end to the other, so as to have the foremost valve over the feed-pipe of the next air-vessel as the last valve is just leaving the last vessel behind.

Now, all this may be very ingenious, but it is anything but new; M. Chameroy, in France, in 1844, and Mr. Pinkus, in England, in 1845, produced atmospheric schemes on the same principle, though different in detail, the latter working by rarefied, or compressed air. We have also in recollection other plans on the principle, but certainly with the working details absolutely ridiculous. We do not believe that, however well the principle may work in a model, there is any chance of its being successfully carried out. In opposition to Mr. Fell's opinion, that "motive-power obtained by aiming at a vacuum has proved utterly abortive, and must of necessity be so, where any extent of power is required," we believe that its success has been perfectly demonstrated, and only requires truly scientific arrangements; that the day is very near at hand when he will see the principle in successful operation; and that locomotion by *compressed* air is an *ignis fatuus*. Every stroke of the piston in compressing air lays an extra load on the engine; and, although when at its maximum the continuous working of the line would appear to equalise it, the great force acting on the joints of the tube, and on such a multiplicity of valves, would cause continuous strain and leakage, and lead to the most destructive results. We have seen compressed air for locomotion attempted by companies and individuals in numerous instances, with excellent working models, constructed on various plans, but they have hitherto been, in every case, entirely unsuccessful; and we have ever thought, with men of science who are favourable to the introduction of the atmospheric system, that compression is wrong in principle, and must always prove a failure.

In the prospectus, it is asserted that one *powerful* stationary engine, for the compression of the air in the longitudinal tube, will be sufficient to work ONE HUNDRED MILES; from which assertion we leave our scientific readers to judge of the practical pneumatic knowledge of the patentee; it alone stamps incredulity on the entire scheme.

NOVEL CARRIAGE—HORSES INSIDE.—An ingenious idea, we are informed, has been carried out successfully in one of the western states of America, by the construction of a one-wheeled carriage propelled by the horses being inside. It consists of a large wooden wheel, 14 ft. in diameter and 6 ft. broad, with foot boards for the horses to hold. From the axis are suspended seats for the passengers, which axle extends on both sides beyond the wheel, it being only necessary to keep them balanced. Iron stays from the extremities of the axle are carried over the top rather in front, which support the seat for the person who drives the vehicle, which is done with the greatest ease, and it can turn in a much shorter space than a coach. A successful trial was made recently with one on the state road in Tuscarawas County, Ohio, carrying 24 passengers, and two heavy draught horses, previously trained, as they are entirely unfettered by harness. A distance of five miles was performed in 28 minutes, and on the return in 25 minutes. The work of the horses is easy, as they travel on an endless plank road.

A ROYAL MECHANIC.—A letter from our correspondent at Singapore describes the extraordinary proficiency which one of the native Siamese princes (Prince T. N. Chau-Fa-Rhro-makhun Isaret Rangsan) has made in mechanics, he having, with the assistance of his own servants and retinue, completed a steamboat of most beautiful construction, and every portion of the engine finished admirably. This model boat is said to be 26½ ft. long, 3 ft. 10½ in. wide, and the engine of two horse-power. She has made several trips up and down the River Menam, in view of thousands of astonished spectators, his Royal Highness generally acting as steersman. He is said to be, of course, proud of his production, and, a few days since, passed up and down in front of the palace, before the king, who was highly delighted, passed the highest eulogiums on his ingenuity, made him a splendid present, and desired him to have another constructed sufficiently large to proceed to Singapore, which he undertook to accomplish. From not having iron or copper of proper construction, his boiler is unusually heavy, and it is understood he will build the next on an improved plan, and send to Singapore for his material. Truly this progress in mechanics is to his credit, and will make him a second Peter the Great in his own country.

LARGE WIRE ROPE FOR THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.—One of Messrs. Kuper's patent wire ropes has been delivered this week at the Edge-hill station of the London and North-Western Railway. It was supplied by Messrs. Francis and H. J. Morton, of this town, and is, perhaps, the largest wire rope ever manufactured; it is 6000 yards, or nearly three and a half miles long, and weighs 18½ tons. It is intended to work the whole of the traffic from the north docks through the new tunnel to Edge-hill. A hempen rope to have done the same work must have weighed upwards of 90 tons.—*Liverpool Mercury.*

THE NEW MARKET IN HUNGARY.

The port of Fiume lies in the Gulf of Quarnero, at the north-east extremity of the Adriatic Sea, between which and the Gulf of Quarnero some of the Dalmatian islands intervene. These islands shelter what would otherwise be an open roadstead, and make Fiume safe anchorage in most winds. Adjacent to Fiume is the bay and small harbour of Buccari, which is quite sheltered, and has good anchoring ground; but it is not so well supplied with water as Fiume. Fiume is connected with South Hungary by a magnificent road, extending from the sea into the valley of the River Culpa, near Carlstadt. From this point the Culpa is navigable; and it falls at Sissek into the Save, which is navigable to its junction with the Danube. These two rivers form a water communication, extending in length 325 miles. Along these rivers, against the stream, which is very gentle, all the heavier products exported from Hungary, the wheat and rape seed of the Banat, tobacco, flax, and hemp, are forwarded to be shipped at Fiume. Wool, as being a more valuable object, and able to bear the cost of a long carriage by land, has usually taken the route by Vienna to Hamburg. At Fiume, the produce of Hungary is sometimes shipped for Trieste; but more commonly direct for the consuming countries in Western Europe. The importance of Fiume, as an outlet for trade, has long been known to the Hungarians and Austrians. In the last century, the Emperors Charles VI. (father to Maria Theresa), and Joseph II., completed each a road from the valley of the Culpa to the coast. These roads still exist—the Carolinan terminating at Buccari, and the Josephina at Zeng. But although these two roads are splendid pieces of engineering, yet they are eclipsed in every respect by a more direct one, opened in the beginning of the present century, by a joint-stock company, whose shareholders were mostly Hungarian noblemen. This road is named the *Ludovica*, after the Arch-Duchess, Maria Louisa, the consort of Napoleon. This Ludovica road, in a course of 80 English miles, traverses an elevation of 1320 ft., which it surmounts by a series of gradual inclines, admitting of easy draught both for horses and oxen. A toll is taken on all goods carried over the road—the rate of which is determined by the nature of the wares, and not by the vehicle or number of draught cattle. The toll books, consequently, form a register of the goods carried on the road, and their contents have occasionally been published. They disclose, however, a paralysed state of trade and of production generally, which indicates how much commerce has been impeded, and industry discouraged, in some of the finest countries of Europe. The great extent of the resources of Hungary are well known from the works of Paget, Bright, and Quin, M'Culloch's *Geographical Dictionary*, M'Gregor's *Tariffs*, and other recognised authorities. These authors have pointed out the abundance of grain, timber, tobacco, tallow, wine, hemp, flax, and oil seeds, which Hungary is capable of exporting, as returns for manufactured wares of all descriptions. The extent of navigable rivers, which would speedily be covered with steamers, exceeds that of any other European state, except Russia; while immense level tracts point to railroads as the least expensive and most efficient means of transport. If the consumption of the country assumed anything like the proportions of that of the United States, the demand would be so large as to necessitate renewed exertions, both on the part of our traders and manufacturers, to supply it. Hitherto this vast and profitable field has been closed by the enormous rates of duty imposed by Austria; and yet the stationary condition of Austrian manufactures is not such as would warrant that the protection afforded has much benefitted the manufacturer.

We subjoin a survey of the imports and exports of Austria, compared with those of the Zollverein and France, both of which countries exceed Austria in extent of trade, although they have less population.

GOODS IMPORTED INTO THE FOLLOWING STATES—1834 TO 1843.

Description of Goods.—(Cwts.)

COTTON WOOL.

Years.	Zollverein.	Austria.	France.
1834	25305	163526	738691
1835	31951	174503	775196
1836	36523	232943	886632
1837	36970	259713	876592
1838	50843	268325	1,025172
1839	47147	250370	810685
1840	72237	339017	1,058832
1841	50218	277896	1,117410
1842	75032	359942	1,146541
1843	84407	415269	1,999997

COTTON YARN, UNBLEACHED.

1834	41874	28737	634
1835	31951	59567	427
1836	36523	62525	382
1837	36970	50067	217
1838	50843	56287	397
1839	47147	61770	501
1840	72237	59742	437
1841	50218	45754	626
1842	75032	52470	555
1843	84407	52024	503

COTTON YARN, BLEACHED AND DYED, AND TWIST.

1834	13353	2482	—
1835	11786	1486	1251
1836	29756	1816	1588
1837	28752	2400	1235
1838	28978	2575	881
1839	28126	2550	632
1840	35909	2473	567
1841	27702	2835	682
1842	30583	2932	971
1843	35848	3538	772

LINEN YARN, BLEACHED AND DYED.

1834	8207	186	5178
1835	8254	311	4778
1836	11233	243	6129
1837	5195	280	8758
1838	5271	287	11516
1839	6334	377	13677
1840	6671	495	11305
1841	6663	782	17873
1842	7199	2	20409
1843	8579	492	9724

LINEN THREAD.

1834	—	91	305
1835	—	108	79
1836	—	127	304
1837	5213	119	179
1838	5420	141	127
1839	5789	137	177
1840	6434	212	29
1841	7022	211	141
1842	7584	281	1061
1843	8020	433	923

LINEN MANUFACTURED GOODS.

1834	14735	805	1,391,651
1835	10877	504	1,479,283
1836	32874	1409	2,036,027
1837	35186	254	1,703,594
1838	43119	893	2,208,479
1839	54450	669	2,388,872
1840	63775	452	2,580,372
1841	56097	1068	3,528,983
1842	46675	1049	3,703,488
1843	43061	328	3,048,889

WOOL.

1834	90285	50653	5411
1835	115437	52632	4625
1836	117805	46250	5117
1837	119395	46711	6192
1838	155355	53816	7042
1839	13.204	56629	6298
1840	165064	40495	6138
1841	149437	51587	6024
1842	163309	58312	6190
1843	150254	59857	4462

SILK—RAW.

1834	—	1032	23657
1835	—	1197	18935
1836	1486	2896	16598
1837	6756	1113	21825
1838	4913	2010	26923
1839	7098	1641	21401
1840	6346	1374	22782
1841	13681	1086	31643
1842	16104	2376	33223
1843	14330	2439	26360

SILK DYED, THROWN, AND SPUN.

1834	1565	24	49
1835	1875	43	41
1836	1709	45	54
1837	1692	27	29

Description of Goods.—(Cwts.)

SILK DYED, THROWN, AND SPUN.—(*Con.*)

Years.	Zollverein.	Austria.	France.
1838	1954	46	17
1839	1835	224	21
1840	1935	227	33
1841	1921	295	62
1842	2292	6	93
1843	2088	13	17

COTTON WARES, BLEACHED AND PRINTED.

1834	13933	34733	9177
1835	14158	26002	7012
1836	14053	31700	6257
1837	15397	40050	193022
1838	17050	41788	269679
1839	16560	12676	349545
1840	17844	411	309436
1841	16279	379	164779
1842	12057	351	341158
1843	10457	217	377582

FLAX, HEMP, AND TOW.

1834	173326	128013	185003
1835	146499	117779	179649
1836	158654	128690	171631
1837	135412	138768	171211
1838	213980	181908	214482
1839	204495	159191	151569
1840	234357	144567	160417
1841	254249	125212	187002
1842	236203	122578	265883
1843	255498	128937	305883

LINEN YARN, UNBLEACHED.

1834	35097	18791	29172
1835	42370	16484	37675
1836	46273	17469	48604
1837	36319	24905	69409
1838	38745	28803	104441
1839	43180	26169	122542
1840	40506	21547	125843
1841	38042	22628	180788
1842	42094	24194	204806
1843	60322	27634	141934

WOOLLEN YARN.

1834	—	2945	1510
1835	—	2768	899
1836	—	4464	1075
1837	—	4261	1678
1838	—	4232	1612
1839	—	6129	1534
1840	21578	9037	2158
1841	22055	7946	2112
1842	26196	10696	1671
1843	33569	10879	1559

WOOLLEN WARES.

1834	13933	25950	3,1719 1,316,419*
1835	14158	48836	31,993 1,054,863*
1836	14053	31759	21,134 1,003,139*
1837	15397	49265	34,148 979,989*
1838	17050	61660	46,821 1,328,935*
1839	16561	32668	44,792 780,139*
1840	17844	20999	47,744 1,534,900*
1841	16279	23407	51,866 1,991,392*
1842	12057	27420	49,196 2,041,795*
1843	10457	30772	51,165 1,985,341*

SILK AND HALF SILK WARES.

1834	£3167	£ 7	£646 10185*
1835	2690	5	554 16368*
1836	3027	4	708 48991*
1837	3994	5	962 27274*
1838	4563	6	947 20664*
1839	4241	6	962 54042*
1840	4558	10	1029 32168*
1841	4883	9	1170 8014*
1842	4944	11	968 8190*
1843	—	7	977 28877*

* Francs.

The countries to which the port of Fiume offers access are Hungary Proper, including Croatia, the military frontier province of Austria and Transylvania, Bosnia, and Servia. Hungary contains 12,500,000 inhabi-

tants; Transylvania, 1,500,000; Bosnia, 1,200,000; Servia, 800,000 = 16,000,000 inhabitants. It is well known that the navigation of the Danube is interrupted below Belgrade for a space of nearly 70 miles by rapids and rocks in the middle of the river, which, between New Moldava and Orsova, flows in a narrow rocky channel. There is, consequently, no trade carried on by means of the Danube between the country above the falls (Hungary), and the Turkish provinces situated below them —that is to say, Wallachia, Moldavia, and Bulgaria. The easiest access to these last-named countries, at present, is by the Black Sea—a tedious and expensive route.

The inconvenience of this route is, however, increased by the difficulties imposed on foreign shipping by Russia, which power holds at present the mouths of the Danube, where that river falls into the Black Sea. Were the access to Fiume free, and the transit trade to Northern Turkey unimpeded, a road would soon be completed from Belgrade to Bulgaria, and Fiume would thus form the easiest point of contact with the middle Danube for all the people situated at the north side of the Balkan. Were this accomplished, at least 4,000,000 of consumers would be added to the list given above, which would increase the total number to 20,000,000, or a figure exceeding the estimated population of the United States.

As this large portion of Europe is almost without manufacture, the great interest which English traders and manufacturers have in its well-being is manifest. The importance, too, of a correct apprehension of what may be expected to result from the present struggle in which the major part of the inhabitants are now engaged with the Emperors of Austria and Russia, is also too evident to need demonstration.

The discontent which has for many years pervaded the European continent is most easily comprehended, when the rapid increase in the population of central Europe is compared with the small progress of trade. Of all the European states Austria has, in this respect, made the least progress. The foreign trade of Austria, with 36,000,000 of inhabitants, is not more than one-fourth that of France, and is about one-third that of the Zollverein, which numbers only 26,000,000 of inhabitants. The imports and exports of these countries were in 1843—

Value of imports	Zollverein.	France.	Austria.	United States.
In 1843	£36,810,526	£40,779,767	£10,187,588	£17,500,000
Value of exports				
In 1843	£24,502,381	£25,990,446	£15,997,422	—

It may be remarked, that the valuations of Austrian produce are usually much exaggerated in the export entries, which explains (after a liberal allowance for smuggling) the excess of exports over imports, shown in this comparative statement. The first thing which strikes us here is the exceedingly small amount of goods exchanged in trade by Austria, notwithstanding the proverbial fertility of a large portion of the empire, and the fine climate of the Italian and Hungarian districts. For this limited trade there are many reasons to be adduced.

The Italian and German provinces, which are either adjacent to the sea, or connected with it by good roads to Trieste and Venice, or by the navigable river Elbe, are burthened with an enormous direct taxation, which increases in proportion to the advantages of position which they enjoy. Hungary is not so taxed, but is, as has been remarked, cut off from the Black Sea by the rapids in the Danube; while the roads already named as communicating with Fiume do not extend beyond the mountains. The navigable river Save connects the Ludovica road at Carlstadt with the Danube near Belgrade and Semlin, both which towns are considerable places of trade. Along this river the chief exportable produce of Hungary is conveyed up the stream to be shipped at Fiume.

The trade of Hungary, on any large scale, is necessarily confined to this channel. Wool, indeed, a great object of export, finds its way by Vienna to Hamburg, either along the Elbe, or by land carriage, which the high price paid for wool can bear; but wool can as well be exported by sea from Fiume.

The only return of the navigation of the Save which is known, is that procured in 1839, from the commanding officer at Semlin, by Mr. Banfield, and published in the *British and Foreign Review*. It is to the following effect:—

Yrs.	Vessels.	Wheat.	Wheat.*	Barley.	Oats.	Maize.	Millet.	Rapeseed.	Tobacco
				Imperial Quarters.					*Cwts.*
1836..	218	62825	33339	2793	6330	20153	2338	640	41293
1837..	244	86425	19478	2088	8775	50738	1171	14127	26273
1838..	475	175036	24090	4505	24420	62659	2578	2626	53933
1839..	378	147206	21055	1349	10770	57092	384	2984	71386
Aver.	329	112324	24489	2686	12548	47910	1617	5091	48203

* Mixed with Rye.

It appears from this official document, that heavy goods are transported up the Save, when prices are such as to cover the cost of carriage to Fiume.

The Hungarians, aware of the importance of this point of contact with the sea, have for some years been preparing for the construction of a railroad from Fiume to Carlstadt, with lines running to Semlin and Pesth. The levelling has been finished, and the works would be in a state of forwardness if they had not been interrupted by the attack made on the Hungarian constitution by the Austrian Government. The Italians have not been indifferent to this new opening for trade. By the last accounts, the Sardinians project a commercial alliance with Hungary, which France and Belgium are sure to imitate. The first result of Hungarian freedom will, therefore, be to revive a trade in the Adriatic, which has not been known since the best days of Venice.

One of the rights of the Hungarian nation, disputed by the Emperor's Cabinet, and insisted on by the Hungarians, is that of freedom of trade, which is taken from them by the arbitrary and illegal establishment of a custom-house at Fiume, at which the prohibitive Austrian tariff is enforced, which has never received the Parliamentary sanction of the Hungarian Diet. The oppressive nature of this tariff is such, that when any difficulty of carriage exists, it puts a stop to all trade. The chief items are stated as follows in Mr. M'Gregor's tariffs:*—

Cotton manufactures—Bobbinet, table, &c.	*per lb.*	£0 10 0
" Ditto, embroidered		1 4 0
" Nankeens		0 1 4
" All other cotton goods		0 2 4
Copper—Raw	*per ton*	1 11 8
" Sheathing and plates		1 0 0
" Vessels and parts of machinery		79 0 0
" Wire		30 0 0
Iron—Pig		8 9 8
" Bar		12 0 0
" Stretched of sizes		14 8 0
" Sheets		19 12 0
" Blacksmiths' work		24 0 0
" Locksmiths' ditto		120 0 0
" Saws, chisels, and files, 12 kc. per lb. or		44 8 0
Lead—for windows, pipes, &c.		16 13 4
Cotton yarn—Plain	*per cwt.*	1 10 0
" Dyed		3 0 0
Linen yarn—Unbleached		0 1 8
" Bleached or dyed		0 16 8
Woollen cloths	*per lb.*	0 3 8
Shawls—*ad valorem*, 60 per cent.		
Sugar—Raw	*per cwt.*	1 10 0
" Refined		1 16 0
Coffee		2 2 0

These rates of duty sufficiently explain the small quantities which the official returns show are imported.

	Years.	Zollverein. Imports.	Zollverein. Exports.	Austria. Imports.	Austria. Exports.	France. Imports.	France. Exports.
Coffee	1834..	£1,135,401	£16684	£250733	£2921	£490216	£1626
	1843..	2,064,082	77882	363020	1515	653800	3647
Sugar	1834..	862,739	40015	365094	16	2,124871	115948
	1843..	1,887,009	61089	931008	14	2,670939	200050
Iron	1834..	186,201	40453	6805	101117	150346	19145
	1843..	1,027,198	54519	101107	114302	379960	25481
Iron, Wares	1834..	94,472	507104	10487	52399	198517	278639
	1843..	217,596	527140	445897	458482	268009	576044

The value set by the Hungarians upon obtaining an outlet for trade is shown by their repeated remonstances with the Austrian Government on that subject. It has been publicly stated in English papers, on good authority, that, in the course of the last year, an address was presented by order of the Diet to the Emperor Ferdinand, praying that he would take steps for securing this privilege to his Hungarian subjects, and pointing out the roads which it was necessary to free from fiscal incumbrances. The Cabinet of Vienna fixed a time for answering this petition, after it should have made due preparation. But in the week in which the answer was to have been given, the Ban of Croatia, Baron Jellachich, received orders to invade Hungary with the troops under his command.

The events which have since happened are well known; Hungary has achieved a virtual independence, and the first act of independent authority, transacted by the President Kossuth, has been the promulgation of a highly liberal tariff.

This tariff is an invitation to all commercial countries to take steps to secure their interests in so large a market as Hungary presents, and to procure safe access, to which nothing more is wanting than the recognition of Hungary as an independent state by the nations of Western Europe.

In favour of this course are the precedents of the South American governments, Belgium, Greece, and more recently of France itself, although in each of these cases no special advantages were offered to trade, as is now the case.

* For the New Hungarian Tariff see the *Mining Journal* of the 28th May.

Original Correspondence.

RAILWAYS AND MINES—By Placer.—No. IV.

"Two persons pay one shilling a mile; three eighteenpence; that's just sixpence a piece, take it which way you will. I repeat, eleven miles here are fourteen. Nothing puzzled me more than the miles; an Irish mile is not only not English, but it's not Irish; a mile is not a mile."—The Stranger in Ireland, 1805.

Sir,—Encouraged by the interest inherent in the subject, we venture to resume its consideration generally, but more particulalry in reference to the letter, No. 2, of "An Engineer," in your Journal of the 26th May; and we regret that, although the writer expresses his views with great perspicuity, and is, moreover, a warm advocate of railway interests, we confess ourselves not yet converted to his views on many points, some of them essential ones; but before proceeding to remark upon them, "Engineer" must give us permission to state, that in having picked up and appropriated a motto here and there, we had no desire whatever to *mystify* him; nor had we "Engineer" in view when we resorted to the works of the author of the *Beggar's Opera*, in our preceding paper, but ourselves only. We took the motto as premonitory, to guide our own pen, to "keep probability in view." So far from wishing to discourage "Engineer" to write a book, we should much desire to see one in praise of railways, either as they are, or as they should have been; such a book would have an attentive perusal from us.

It will be in the recollection of your readers, that in starting our subject, we undertook not only to prove that, although mines, after dividing them into classes of different degrees of merit, were still speculations of the most speculative nature, yet that in the actual circumstances in which railways were placed, the former had become a *comparatively* safe investment; and we confess, even with a natural bias to our own views, we do not see that "Engineer" has yet shaken our position, or that the line of argument pursued by him, so ably and ingeniously, is calculated to do so. The consolation offered by your correspondent to holders of railway stock is simply based upon *depreciation* in the value of shares not being an actual loss—whereas, if any sum of difference between the price of a share to-day and that of yesterday is not subsequently recovered, it affects the value of the whole number of shares in the undertaking, be they 1000 or 20,000; and although it is admitted the total of such shares do not actually change hands in the short space of seven weeks, yet they do so ultimately; and from 130 premium, or 230*l.* per share, Great Westerns having declined to 78*l.*, there is a clear loss to either one or a number of intermediate individuals of 152*l.* per share. We beg to inquire if any reasoning upon the fact, that transactions in railway shares are principally of a jobbing character, and that "differences," as in the funds, are only paid instead of the actual stock being transferred and delivered over, can alter our position?

On the contrary, the "jobbing" constitutes the very danger itself to the simple investor for an income; for whilst he, snugly esconced in the country, is counting over his scrip or transfers, and reckoning them as worth so much, operations are going on at head quarters, in the board room, or over the claret at Albert Gate, and last, but not least, in Capel-court, by which his capital is wofully, although it may not be suddenly, undermined. What view, for instance, had the originators of the multitudes of extensions and branches now existing to the benefit of the quiet capitalist, when those additions to the trunk lines were decided upon? None whatever; such a consummation was never thought of. The branches were created *to sell the shares*. The public were the victims who bought them; or, if it be not so, why since 1847 have the *returns* of traffic on nearly every line in England so materially diminished, notwithstanding the addition of a large per centage of mileage, in the aggregate, to all of them? thus proving not only that the branches, &c., were not wanted, but that they are worse than useless at the present time. True, there may be other causes in operation of a depressing character as regards railway returns. Revolutions on the continent, re-acting upon our commerce and manufactures, have diminished the number of travellers, and lessened the quantity of goods consumed and exported; and as the ill-omened wave reaches the middle and lower classes, we see its effects in the item of increased third and second-class travellers. It is but fair to give to railway directors all the benefit of events from causes beyond control; but the *root* of the evil remains, and ever must remain, until, as we have before suggested, *all non-remunerative branches and extensions be abandoned.*

If the following statistics of the principal lines be correct, there is ample proof of the clearness and soundness of our position, as to a permanent falling off in the value of railway property, and its causes, taking the good and the bad together; and we recommend "An Engineer," after running over the ground with us, rather to turn his talents into our channel than waste them "on the desert air," since no writing can improve the picture.

Comparative Table, showing the Traffic Returns and Number of Miles Opened in 1849 *and* 1848 *in the following Railways, to 26th May,* 1849:—

	Returns. 1849.	Returns. 1848.	Miles opened. 1849.	Miles opened. 1848.
London and North-Western	£39,798	£41,784	436	428
Midland	20,815	21,198	471	423
Great Western	16,466	20,942	230	266
Eastern Counties	14,051	14,201	322	295
South-Western	9,662	8,628	216	194
Brighton and South-Coast	8,448	8,127	170	162
South-Eastern	8,063	8,422	165	165
York and North Midland	6,727	8,100	256	234
Blackwall	777	1,059	5½	4
Totals	£124,807	£132,427	2273½	2111

Result:—162½ miles more opened in 1849 than in 1848—7670*l.* per month, or nearly four hundred thousand pounds per annum decreased traffic. Eight millions of capital, at 5 per cent. per annum, become unproductive.

We have already applied a critical analysis to the Eastern Counties and the South-Eastern. Let us examine what depressing causes hang over the others, in addition to palpably bad extensions.

London and North-Western.—Chester and Holyhead, a total loss of 1,500,000*l.* A new station "vestibule," and so forth, at Euston-square, just finished, costing one hundred and twenty-five thousand pounds, totally condemned, even by the railway interests.

Great Western.—Wandering into the country to Basingstoke, Newbury, Hungerford, Cirencester, Cheltenham, and Westbury, called "tributary lines," and the extension to Plymouth. No part of Cornwall can sustain a broad gauge double-line railway. Exeter to Plymouth (or the South Devon) only gives a net return of 40,000*l.* upon a capital and loans of nearly two millions, or about 2 per cent. per annum, not forgetting the loss of four hundred thousand pounds by the atmospheric experiment!

Midland—York and North Midland.—Hudson.

South-Western.—Sound as to traffic, for which they are indebted to main line to Southampton, the packets, and frequent passage of the Queen and court to and from Osborne.

Brighton.—What would the traffic be to Brighton only, without going a single mile beyond it into the wealds of Sussex?

Blackwall.—The following advertisement appears in the papers—"Railway Arches.—The directors of this railway *beg* to call attention to the arches of the junction line. These arches extend from the Commercial-road to the Mile-end-road. Parties desirous of leasing or purchasing any of them are requested to apply," &c.

[What "on airth" can be done with these arches (or those of the 2½ miles viaduct on the South-Western, Vauxhall to Waterloo), nobody knows. They are to be let. Had they not better have been let alone?]

Amongst other notabilities, in the way of facts, there appears the following paragraph in the *Railway Chronicle* of May the 26th, relative to the York, Newcastle, and Berwick:—"From the evidence taken before the Committee of the House of Lords, on the audit of railway accounts, the disclosures that have recently taken place have lessened the market value of those shares, *within the last two months*, to the extent of three millions sterling, or equal to one-third of its share capital." "An Engineer," we fear, will not allow this to be called *loss*; although it is apparently set down as such *by a railway authority.*

"An Engineer" begins his letter, No. 3, by asserting that "these two great interests are so dependent on one another, that whatever tends to depress the one affects the other." This admission we agree with so far only as to the effect depressed railway shares may have upon mining shares, as we do not see how a depression in the latter interests (so minute are they in comparison with those of railways) can exercise disturbing causes over the former. True it is, that the produce of collieries and quarries is largely conveyed by rail, and largely consumed, as well as metals, in railway buildings and machinery. The largest item, iron, has enriched a few; but the excitement over, or checked, the article is now scarcely at a remunerating price. Cui bono? But in our particular department of mines we scarcely know of a single ton of ore conveyed by railway—Cornwall and Wales *ship* their ores to Swansea; and when smelted they are re-shipped every where, but always by river and sea. In what sense, then, are the interests of railways and mines identical?

"An Engineer" should be aware it is 17 miles more to Dover by rail than by the road, and not 7—a typographical error, however, for which he is not responsible.

"*Mais, revenons à nos moutons.*" How stand the mining interests at this moment? Not particularly flourishing, it is true; and "Engineer" has attempted to show that 10,000*l.* loss (according to our mode of estimating it) has occurred in four mines during a period of seven weeks, to which sum a mine, called "Abergwessin" contributes no less than one-half, or 5000*l.* In last week's *Mining Journal* there appears, however, a letter from the purser of the said mine, challenging the truth of this statement; or rather, in the nervous language of an injured individual, and probably a large shareholder, calling the statement "grossly inaccurate," and that no shares have been sold under par. If it so happens that some mining broker has fallen into an error in the quotation of 3*l.*, instead of 8*l.*, for Abergwessin shares, he will, perhaps, have the candour to acknowledge it, and so set "An Engineer" right; and regarding Caradon, Heigneston Downs, or Comfort, they *may* have fluctuated to the extent stated quite independently of unnatural causes; but whether or not, we leave to the pursers of these mines, or other parties interested, to acquiesce in or dispute. Mines have their extensions as well as railways—the "levels" very often disappoint hope, and hence, with a full knowledge of this fact, we have already admitted that fluctuations and losses in mines are inevitable—in fact, *natural.* He who ventures in a mine plays for a richer stake than in any other speculation. It is the *mode of playing* that constitutes the chief mischief and evil, just as a vessel deprived of rudder and sails is pretty sure to run upon the rocks, and jeopardise the lives of all aboard.

Mines, however, will live and be worked when Railways will be, perhaps, either forgotton, or remembered only for their deformities. They are a purely artificial production. A natural road is over the hills, an artificial one into the swamps of the country and the "back slums" of the towns, with all the concomitants of smoke, dirt, sulphur, and noise. Every body remembers the rage for caoutchouc coats—where are they now? The "staple" has returned to our backs, and mackintoshes are almost as scarce as mummies; so it must ever be with all artificial productions—used for a time, but soon "used up." Happy that section of the country, we say, where Railways do not penetrate, and the man whose judgment will now keep him from touching a share in them.—*London, June* 8.

RAILWAYS AND MINES.

Sir,—The second communication by "An Engineer" on this subject appears, unfortunately, to have given offence to Mr. P. P. Couch, and your able correspondent "Placer." Mr. Couch complains that the market price of the Abergwissen shares were quoted as at 3*l.*, which, he says, "is grossly inaccurate." As was stated, this price was taken from your columns, and Mr. Couch has himself to blame if it be inaccurate; for these shares have been quoted in your "Share List" at 3*l.* ever since the 14th April, so that he has had ample opportunities to furnish you with correct information as to the price, in case that quoted by you were incorrect. Having permitted the price of the shares to be quoted at 3*l.* for *seven* weeks, he thereby admitted, negatively, the accuracy of the statement, and has certainly no right to complain of a "gross inaccuracy," which is attributable to himself. If he be unwilling to correct errors, and permits erroneous information to be conveyed to the public for seven consecutive weeks, he ought not to be surprised at credence being given to it by those whose only source of information is the public journals. It is satisfactory to know, however, that the Abergwessin Mine is in a more flourishing condition than was indicated by the "Share List," and it is hoped that its purser will be less chary of his information in future.

"Placer" appears to say, that in the paper alluded to, "An Engineer" has transgressed the bounds of fair *discussion* by entering into *controversy*, from which, he apprehends, "ill-feeling and ill-natured remarks" may be "engendered, out of which nothing good can come." If there be anything in the slightest degree offensive to your correspondent in "An Engineer's" second communication, "Placer" may rest assured that it was perfectly unintentional, and that neither "ill-feeling nor ill-nature" had any influence in those remarks. How to discuss without controverting (in the accepted meaning of these words) opinions to which you dissent, and which it is your object to disprove, is a difficulty which can only be got rid of by leaving the subject untouched, and the opinions unnoticed. To discuss is to examine, to argue, and to controvert is to dispute, or disprove—the one, therefore, is a consequence of the other, and if all discussions are to be conducted without examination and argument, it is very possible that no opinions may be controverted; but it may be fairly asked, of what earthly use are such discussions? No truth will be elicited, no error will be exposed, no good effected by them. You wisely permit your correspondents to exercise their undoubted right as to the mode of treating a subject, and it is but reasonable that they should show a similar tolerance towards one another, and not call upon you to use the editorial power of exclusion from your columns on some fancied and vague grounds of complaint, which are as unreasonable as they are unjust.—An Engineer: *June* 4.

COPPER SHEATHING.

Sir,—I was in some hopes, when the discussion on this important question recommenced, that it would not terminate before we had arrived at some practical result. The last communication which appeared on this subject was from the "Roaster Man." In this he mentions the object of the smelters "is to get all the metal out of the ores as soon as possible, so as to swell the surplus, without any regard to the durability of the copper." I have been some years connected with smelting establishments, and I must confess that I do not comprehend his term of the swelling the surplus. I have likewise always thought that one of the first objects of the smelter was to obtain his copper as pure and durable as possible. From the tenour of his letter, it appears that he is unwilling to proceed further in the discussion, without receiving a fair *quid pro quo*, in the shape of information, from Mr. Prideaux. I think that gentleman has answered every question fairly, and the disinclination appears to rest on the part of the smelters. What mystery in the art of refining copper there can be, I am at a loss to conceive; from the "Roaster Man's" allusion to letting the cat out of the bag, I presume there must be something more meant than meets the eye. I have always found refining a straightforward simple process, attended even with less difficulty than making regulus; the metal properly brought forward in the roaster, which I have no doubt the "Roaster Man" fully understands, the final process is a mere bagatelle. I trust that the question of copper smelting will again be resumed in your columns; and as I think it will be the third time the discussion has been on the tapis, and, according to the old proverb, "all good things are three," probably we shall not separate until we have arrived at an approximation near the truth. In the meantime, I should feel obliged if the "Roaster Man" would define what he means by swelling the surplus; I have never been able to get out of the ore more copper than it contained.

Paddington, May 25. Germanicus.

COPPER AND COPPER SHEATHING.

Sir,—As one interested in this branch of our national manufactures, I regret to see that the important and instructive discussion, maintained for a considerable time in the pages of your Journal, has been abandoned, without coming to anything like a definite understanding. With regard to the important questions at issue, a great many plausible ideas came forth during the progress of the series of papers, which appeared from time to time in your columns, on the qualities of copper best adapted for sheathing; but I am not aware if even the theories of your chemical correspondents have at all tended to shed that degree of light upon the subject which might prove of any practical utility in the operations of the smelter. I have not the least doubt but a great benefit would accrue to the public in general if chemists were liberal enough to come forward with even a tithe of those facts which they cannot fail to elicit in the daily pursuit of their avocations; but then it may be contended, on the other hand, that they have done so already, and that the practical smelter has not reciprocated as he ought to have done. Here arises a difference of opinion, in respect to which the onlooker might exclaim with some degree of reason, *cui bono*, when both parties are afraid of communicating that which they know to be of practical value. This is an age noted for the rapid advance of every department of national industry; and although a practical man, in the common acceptation of the term, I must confess that science—all powerful science—is the grand motive-power in producing these beneficial results. That the question at issue did not receive

that amount of attention which it merited, I am convinced of, from having observed that some of your most talented correspondents kept aloof from the discussion almost entirely, especially Dr. Murray, whose great experience, and well-earned name in the scientific world, would certainly have insured respect for his opinions.

Mr. Prideaux and "Germanicus" were the last in the field upon this subject; and the most valuable part of the discussion, I dare say, emanated from their pens; but, at the very crisis, when the smelter expected to learn something tangible, they gave up the subject, and there it remains. The "Roaster Man" submitted what he considered, I dare say, to be a posing question, with regard to the purity of the Cornish assayer's prill, to which I think an answer may be given in due time. I hope that the discussion of this question may again receive attention from your many eminent correspondents; and that it may be carried on with that liberal spirit of reciprocity on the part of the scientific man on the one hand, and of the practical smelter on the other, which its importance ought to command, is my sincere wish.—SLAG SPAULER: *Pendelawdd, June 4.*

BRASS AND COPPER TUBES—RICHARDSON AND Co.'s PATENT.

SIR,—Our attention has been directed to "Observer's" letter, in your Journal of the 26th of May. He appears determined either to *pervert* or *mystify* the truth, with reference to our patent, and has again clearly shown (we repeat it) that he is meddling with a subject of which he knows nothing. We, therefore, must refer him to our former letter, which has wounded him so severely, and called forth the harmless fury of his frothy elements.—W. H. RICHARDSON, Jun., & Co.: *Darlaston, June 7.*

THE LONDON, &c., COAL CONSUMERS' COMPANY.

SIR,—The public good has rarely, if ever, been propitiated by the establishment of joint-stock coal and colliery companies, whilst great private loss and consequent suffering has resulted from them. A very cursory inspection of the share list is quite sufficient to prove this, and the recent history of the coal trade is replete with failures of this description. The Durham County Coal Company, with 10,000 shares, upon which 45*l.* each has been paid, is quoted at 9*l.*; the Great Northern Coal Company, with 15,000 shares and 23*l.* paid, is selling at 2*l.* a share; Cameron's Steam Coal Company, with 20,080 shares, upon which 7*l.* per share has been paid, is only worth from 1*l.* to 2*l.*; and so on. There is not one even at par, much less at a premium; whilst others are absolutely unsaleable, although nominally quoted at a great discount. This is plainly indicative of the unremunerative nature of these speculations; and with these facts constantly before the public, it is somewhat surprising that no useful lesson has been deduced from them. Ever and anon new projects are started, differing in no essential particulars from those which have gone before, and if successful in obtaining shareholders and a colliery, speedily enter the share lists at a large discount. Whatever uncertainty there may be, and is, generally, in mining adventures, there is none as to the results of coal companies. After the lapse of three or five years, there is a cheerless sameness in them all; first comes a few years' dividends from "cooked" accounts, and then no dividends at all; or, if any, so infinitessimal in amount as to be inappreciable.

In the Journals of last January an attempt was made to discuss and determine the cause of these unvarying failures, to which such of your readers as are interested in the subject are referred. It may, however, be stated here that the supply of coal is so easily obtained, that it is always equal to, and very frequently exceeds, the demand; and that, consequently, the rate of profit is necessarily low, the income of the coalowner being derived from the aggregate profit on a large quantity. Some ship 1000 tons a day, others a still greater quantity. Now, supposing the clear profit to be sixpence per ton, such a coal owner would derive an annual income of 7500*l.* from his collieries. It is well known that the profits in good and skillfully conducted collieries range from 6d. to 2s. per ton, and that on a yearly average they very rarely amount to the latter sum. Under such circumstances, and with a constant and active competition to contend with, it is very clear that the coal trade will not bear the imposition of the expensive administration of a joint-stock company, and that the failure of such concerns are inevitable.

These remarks apply to cases similarly circumstanced, as to the facility for mining and the distance from the market, the quality of the coal, &c. In London the principal element in the cost of coal is its conveyance, and whatever tends to increase or lessen this expense raises or lowers the price to the consumers. Yet with this obvious fact before us, we find the projectors of a coal company promising to supply their shareholders in London at 10s. per ton less than is charged for Newcastle coal—the company's coal having to be conveyed 1000 miles, and the Newcastle 350 miles by sea! The absurdity of such a proposition is so apparent, that wonder at the temerity of the parties making it is not the only feeling to which it gives rise. At the same time it must be admitted, that it is quite possible that the directors of this incipient company are all highly respectable and very honourable men, in "blissful ignorance" of the real merits of the scheme to which they have lent the authority of their names; yet they must not be surprised at, and certainly are not entitled to any peculiar exemption from animadversions on their project and conduct, which may be neither laudatory or very agreeable to them.

It would be somewhat interesting to learn the data upon which, after supplying the shareholders in London with coal at 14s. per ton, it is "presumed that the general profits of the company cannot be less than 20 per cent." In the absence of official details, the value of the few figures already given may be ascertained, and applied as a test. The capital is to be raised by 25,000 shares, and 5000 debentures at 2*l.* each, which will amount to 60,000*l.*; a profit of 20 per cent. on this capital is 12,000*l.* To realise this at, say, 1s. per ton clear profit, would require the sale of 240,000 tons to non-subscribers, to which is to be added 25,000 tons supplied to shareholders—thus making the whole annual produce 265,000 tons, or 883 tons per day (of 300 working days to the year).

Now, Sir, taking these figures as we find them, it would be interesting to know how these 240,000 tons per annum are to be disposed of, for the demand of the markets, both at home and abroad, is insufficient to absorb the present supply, any increase of which will certainly not have a remunerative effect. The capability of the mines to produce 880 tons per day may also be gravely questioned. It will be in the recollection of your readers, that after repeatedly promising 1000 tons a day, a coal company, which has recently occupied a considerable space in your columns, could only realise 65 tons per day, and for even this small produce they had great difficulty in finding a market.

A large trade like that "presumed" in the advertisement of this company, shut out, as it necessarily is, from the London market, requires a long time, and an extensive commercial connection to establish, and cannot be called into existence by the issue of a prospectus, or abstract statements and calculations. The profits, therefore, are about as apocryphical as the promised price of coals in London. Not so the capital, however, if it ever be raised; for, from what has been said, it is pretty evident it will soon be dissipated; of this, at least, there is a tolerable certainty.

Neath, June 5. J. RICHARDSON, C.E.

STEAM LOCOMOTIVES ON COMMON ROADS.

SIR,—Should the promoters of common road locomotion be able, at the prices stated, to realise the anticipations of "One of the-Party," there is no doubt but that it would become as popular as ever railways have been. It is, I apprehend, in the enormous original outlay in the construction of railways, that we are to trace the decline in the value of railway property; a large portion of the expense has been for cuttings and embankments, rendered necessary from the impossibility of the present locomotive ascending steep gradients; while, had they been able to keep to anything like the inclines of the road, one-third, and, in some cases, one-half the cost might have been saved. There will be in future no necessity for such extravagant outlay, for it can now be demonstrated beyond the possibility of doubt, that either on the plan favourably noticed by your correspondent, or that of my respectable co-inventors, Messrs. Cunningham and Carter, whose model is now exhibiting, any reasonable gradient may be ascended and descended with perfect ease and safety; nor would the expenditure of power be more than on a level, for the excess employed in the ascent is equalised by the diminution in the descent; and when we consider that every thousand pounds saved in construction, if put to interest at 5 per cent., will pay the cost of working 10 trains per day in perpetuity, the advantage of any reduction in construction becomes apparent. It is to be hoped that the promoters of steam locomotion on common roads will not fall into the same error, by expending large sums in the preparation of the road, when a little increase of power will, in the end, prove more economical. I have a plan for assisting a locomotive on common roads, which, should the parties interested consider it worth their attention, I shall be happy, at a future period, to explain. JOHN WESTON.

WORKING RAILWAYS BY CONTRACT—ATMOSPHERIC.

SIR,—Myself and friends fully concur in the suggestions made in last week's *Mining Journal*, as to some amalgamation taking place among the patentees of various systems of atmospheric propulsion; and, believing it to be the best method for quickly bringing the railway public alive to its manifest advantages, we are willing to enter into such an understanding on equitable terms, and to agree to any arrangement of details which may be decided on by honourable and disinterested parties. J. WESTON.

Portland Town, June 7.

ON THE NATURE AND PROPERTIES OF SLATE ROCKS.

I.—GISEMENT.

SIR,—The true recognition of the origin and relative location of this variety of the schistose rocks, has been as much beset by anomalies of opinion, expressed in as many varieties of *phase* as that of any other moot point of physical geography, and whilst a few have asserted its purely sedimentary nature, the generality of geologists have been busy with their notions of its plutonic character and igneous development; the various disquisitors have as yet been unable to designate and allocate this singularly useful lamellar deposit, and no wonder, when assertions and theories have had, and are to have, no other basis than the merely abstract opinions of these wrangling aspirants to posthumous fame, befooled with the desire that their ideas, taking precedence of all others, may be as permanently identified with themselves by the iconographic capabilities of the printing press, as are the stratified medalions of ancient forms of life upon the perishing tablets of mountain structure.

Although the incongruity alone of these scientific theories of dreamy speculators may not be sufficient to annul the authority of high-sounding names, by consigning to an early oblivion the futilities and unwisdom of such furtive squalors, the play of negative and positive facts in comparative argument is largely competent to discomfit the best and most respectable opinions which happen to be founded on mere speculation, without the lights of observation and induction.

What consternation and surprise occurred with the discovery at Whaley, near Chapel-en-le-Frith, Derbyshire, of a lode of galena, interstratified with a bed of the mountain mine coal, solely because metallic lodes are deemed of igneous origin; and by one of the previously assumed phantasies, it was deemed inconsistent with possibility that a purely aqueous deposit, like coal and its shales, could exist in confraternity with a trap-dyke or primitive rock, upon which the plutonic fires have impressed their varied characters, and how significant to the physical metallurgist and inquisitor into the origin of stone coal will be the fact, that *"the coal in contact with the lode was in the condition of anthracite."*

A little reflective inquiry into the difference between the true volcanic and primitive tellurian rocks, in the unmistakably igneous character of basalt, and polymorphic condition of the granitic series, will attest that the tellurian are by no means identical with the volcanic fires; and whilst the latter in vicarious periods of intensity is competent to fuse, the former has never yet, in any age, been strong enough in concentration to produce even a tufaceous or semi-vitreous compound out of the alumino-siliceous materials of the so called primitive rocks, although aided by the inducing properties of marine and vegetable alkalies.

Having thus far premised as an *ad interim* argument, I proceed to assert the identity of the deposits of steatite, soapstone, shale, and similar schistose formations of the carboniferous strata, with the grauwacke and slates of the so called trap series. What can be more lucid or convincing, than the similarity of their gisement, composition, and physical qualities?

It is true that the oxide of iron in the fresh siliceo-aluminous deposits is generally a peroxide, 2 Fe + 3 O, whilst in that of the trap rocks and green sand it is in the condition of protoxide, or Fe + O; but the intermediate stage of the carboniferous series, being a mixture of 2 Fe + 3 O with Fe + O, shows distinctly that the protoxide of iron of the trap rocks has been formed from the peroxide of the nascent schists by the agency of carbon, nearly always present in these deposits at an early period of their existence, but seldom or never in their ultimate conditions, which, except in formations devoid of an oxygen-yielding substance, as limestone, invariably ministers to the formation of a lower state of oxidation, and in some instances to the production of metallic bodies in a metallic, reguline, or native state. The oxygen of the peroxide has combined with the carbon in the shale, with the evolution of carbonic acid, which, in some instances, has contributed to the formation of the well-known ores, the carbonates of iron, and the production of a protoxide of iron in the slate and grauwacke. Such are amongst the chemical relations tending to instance an identity in origin of the carboniferous shales with the slates and grauwacke of the trap rock series.—WM. RADLEY, Ch.E.: *Growa Slate Office, City, June 5.*

Recipes.

[Continued from the Mining Journal of May 26.]

RED COLOURS—CARMINE—A PIGMENT MADE FROM COCHINEAL, as follows:—No. 1: Boil 1 lb. of cochineal, and 1 oz. of bitartrate of potash in 4 gallons of pure distilled water, for 15 minutes; strain the decoction through flannel—add 1 oz. of alum and ½ oz. of carbonate of potash, and again boil for five minutes; remove the liquid from the fire, and let it stand in glass or earthen vessel for two or three days, that the carmine may subside.—No. 2: Boil 1 lb. 4 ozs. of cochineal, and 115 grains of carbonate of soda, in 4 galls. of soft water, for 20 minutes; then remove the boiler from the fire, and add 6 drams of alum, and 1 dram of bitartrate of potash; stir the mixture for a few minutes—let it stand for a quarter of an hour, for the dregs to subside, then carefully decant off the clear liquor—strain it through a fine silk sieve, and add the whites of two eggs, well beaten up. Sometimes the carmine will immediately separate, but at other times it is necessary to put the liquor again over the fire, and heat it, but not to the boiling point.—No. 3: Boil 1 lb. of cochineal and 2½ drams of carbonate of potash in five pails of water for a quarter of an hour; remove the decoction from the fire, and stir in 1 oz. of alum—allow the solution to stand for a quarter of an hour, that the dregs may subside, then decant the clear liquor, and put it again over the fire, at the same time add 3½ drams of isinglass, dissolved in 1 gall. of water, and strained. At the moment of ebullition the carmine will rise to the surface; the pan is now to be removed from the fire, and left at rest, that the carmine may subside. It should be dried in a stove, at a temperature from 82° to 86° Fah. A wood or charcoal fire should be used in the process, as the effluvia from coal fires is said to be very injurious to the product.

CARMINE LAKE.—No. 1: To the coloured liquor remaining after the preparation of carmine, some recently precipitated and still moist alumina is added, and the mixture stirred and heated a little, until the colouring matter is carried down with the alumina.—No. 2: Add a solution of alum to the coloured liquor remaining after the preparation of carmine, and then a solution of carbonate of potash as long as any precipitate is formed. Solution of tin is sometimes added to brighten the colour.

LAC LAKE.—Boil fresh stick-lac in a solution of carbonate of soda, and then add a solution of alum as long as any precipitate is formed.

ARTIFICIAL MAHOGANY.—The following method of giving any species of wood of a close grain the appearance of mahogany in texture, density, and polish, is said to be practised in France with such success, that the best judges are incapable of distinguishing between the imitation and mahogany. The surface is first planed smooth, and the wood is then rubbed with a solution of nitrous acid; 1 oz. of dragon's blood is dissolved in nearly a pint of spirits of wine—this and one-third of an ounce of carbonate of soda are then to be mixed together, and filtered, and the liquid in this thin state is to be laid on with a soft brush. This process is to be repeated, and in a short interval afterwards the wood possesses the external appearance of mahogany. When the polish diminishes in brilliancy, it may be restored by the use of a little cold-drawn linseed oil.

MAHOGANY STAIN.—No. 1: Pure socotrine aloes 1 oz., dragon's blood ½ oz., rectified spirit 1 pint—dissolve and apply two or three coats to the surface of the wood; finish off with oil or wax tinged with alkanet.—No. 2: Wash over the wood with strong aquafortis, and when dry apply a coat of the above varnish—polish at last.—No. 3: Logwood, 2 ozs., madder 8 ozs., fustic 1 oz., water 1 gall.—boil two hours, and apply it to the wood several times boiling hot; when dry slightly brush it over with a solution of pearlash 1 oz. in 1 quart water—dry and polish as before.

WASH TO WHITEN THE NAILS.—Diluted sulphuric acid 2 drams, tincture of myrrh 1 dram, spring water 4 ozs.—mix. First clean with white soap, and then dip the fingers into the wash.

PETRIFIED OIL PAINT.—Messrs. Quarterman and Son, of John-street, New York, have made a valuable discovery of a petrified oil paint, which is fire-proof, and well adapted for roofs, walls, cisterns, and many other purposes. We have seen a block of wood, on which a layer of this paint is laid, which possesses all the hardness of light drab freestone, and has the same beautiful appearance. It can be made to be applied either with brush or trowel to cover a brick wall, an under coat of mortar, or a wooden partition. The receipt which Messrs Quarterman has forwarded us, is in the proportions—1 lb. of Quarterman's drier, 1 lb. of white lead, 2½ lbs. of clean sand, the whole mixed with boiled linseed oil. It can mix with various colours, and for a plaster coating—it will cost about 2s. 6d. per square yard. Every person can thus make it up to suit himself, and use it in the state most suitable.

RECEIPT FOR BOTTLE WAX.—Black resin 16 lbs., bees' wax ½ lb., ivory or lamp-black 1½ lb.—mix with heat. Venetian red, red lead, or bole, may be substituted for lamp-black.

RAILWAY CHARGES AND PARCELS.—A circular has been issued by the Railway Commissioners to traders and carriers, requiring information as to the utility and practicability of railway companies publishing their rates of charge for goods, as well as on the question of uniformity of charge. Memorials to the Railway Commissioners, and petitions to Parliament, have been signed, and others are being signed by wholesale houses, traders, and carriers, in various towns, praying for a revision of railway charges on parcels, and equality of treatment, with a view to fair competition. The memorialist allege that the railway companies endeavour to prevent traders packing small parcels into one; to get every small parcel carried separately, whereby they get the full charge on each, or to charge as much on one package of smalls as if each small parcel was sent separately; of injury to trade and competition by delaying and opening parcels and injuring carriers who compete with them at less than their own rates.

THE RAILWAYS OF THE UNITED KINGDOM.*

Under this unassuming, but really most important title, there has been just issued by Messrs. Smith, Elder, and Co., of Cornhill, a work of much interest, extending over upwards of 800 pages, in which the entire of the railways of England, Scotland, Wales, and Ireland are statistically considered, in relation to their extent, capital, amalgamations, debentures, financial position, Acts of Parliament by which regulated, creation and appropriation of shares, calls, dividends, and various other minor particulars. The whole has been concisely arranged from solely authentic documents, and the accounts of the several companies have been arranged on one uniform plan. The volume, which carries with it the conviction of the employment of weeks and months of untiring toil and perseverance, is the production of Mr. Harry Scrivener, the highly-respected secretary to the Liverpool Stock Exchange, and the author of a *History of the Iron Trade from the Earliest Periods to the present Time*—the best, and perhaps the *only*, authentic work on the subject, and the greater part of which was originally published in our columns by the courtesy of its author. Connected with the iron trade from his earliest years, and having for a long period discharged the onerous duties attached to his position with two of the largest houses in the iron manufacture in the kingdom; aware of its high and still growing importance as *the* staple industrial pursuit of these islands, to the success and magnitude of which trade may be traced the origin of attaining the position we hold in the scale of nations, and interesting himself in every detail of its progression, past, present, and to come, no man was better calculated to produce such a work than Mr. Scrivener. The same observations will aptly apply to the work under notice. Having now for some years filled the important post of secretary to the Liverpool Stock Exchange, in addition to his extensive experience in the iron trade, he has been placed in a position to watch the giant growth of the railway system, the sanguine expectations, the wild speculations, the bubble schemes, the ill-got wealth, the broken fortunes, and the crushed hearts and hopes which have been the result thereof. In the work before us, its author has collected materials from every available source, and has produced a mass of matter, interesting alike to the shareholder, the statistician, the statesman, and the general reader.

We shall now proceed to cull a few flowers from this extraordinary garden of facts, showing how vast, how inconceivably extensive, are the resources of this fertile land, when once the energies of her people are aroused, and the progress of knowledge and the advance of science need a change. From the summary of the amounts received by railway companies, as published by the commissioners, we find that up to the 30th August, 1848, there were paid on calls 131,910,368*l.*, of which 90,600,319*l.* has been received since 1843; in addition to this, of the sums borrowed by the various companies there is still unpaid 33,844,188*l.* There remains due on calls 11,288,008*l.*; balance of capital yet uncalled, 98,281,625*l.*; and they have still the power, under their Acts of Parliament, to borrow 42,387,289*l.*, or a grand total of 317,711,478*l.* agreed to be invested in the construction of railways, which, at 5 per cent., will require the sum of 15,885,574*l.* annually to pay the interest. Of this startling amount, the London and North-Western represent a capital of 26,826,771*l.*, with 488 miles, now producing revenue; Great Western, 15,448,913*l.*, with 230 miles; Midland, 14,042,340*l.*, with 471 miles; and, by reference to our railway share list, the various amounts absolutely expended, with the lengths open, will give a general approximate idea of the sums for which they are liable.

We will now proceed to Mr. Scrivener's introduction, in which we are informed that the general information contained therein has, for the most part, been taken from the Railway Commissioner's reports, deeming that he could not follow safer guides; and he calls attention to the acknowledged fidelity and manifest ability with which they have fulfilled their important duties. The courtesy and prompt attention received from the secretaries to the railway companies generally, and the official gentlemen at the boards, is handsomely acknowledged; and the author requests the public to receive this as evidence that no vexatious barriers are raised to hinder research, or stifle inquiry, but that a forwardness is ever shown to help those who seek for information. The following extract, speaking of the mighty growth of the commercial grandeur of Liverpool, her traffic, her position, and her wealth, will be read with interest:—"Liverpool is the *greatest thoroughfare in the world*, and as such her streets and quays, teeming with human life in its fullest activity, presents a picture deeply interesting to the contemplative mind. *From* her quays depart a mighty fleet of great and small steam-ships, whose repeated voyages are performed with a punctuality and a rapidity which induces a beholder who watches their periodical exploits to acknowledge and wonder at the mighty victory now achieved by man over the boisterous elements, which he has been graciously permitted to subdue and render subservient to his own convenience. *To* her quays flock travellers from the villages, the towns, and the remote districts of England; from the metropolis, the centre of every movement, a goodly company arrive; they come also from Ireland and from Scotland, all for the purpose of embarkation. *On* her quays may be seen people of every tongue and nation; for here are gathered the travellers from the continent of Europe preparing for departure, and there, in another spot, may be seen, grouped in hundreds, England's poorer children intending to emigrate, and seek beyond the seas, in British colonies, a wider and less cramped field for their exertions, where labour meets with its sure reward, and where a patrimony may be secured which shall descend to their children's children, who will inherit the land, and whose reputation and name will not be unworthy of the race from whence they sprung. Her river is the great highway of nations; tide after tide as it rises brings into her spacious docks ships richly laden with this world's treasure, the produce of every clime, and tide after tide as it recedes carries on its ample bosom ships fully laden with manufactured goods, prized and valued in every market in the world to which they have gained access." The introduction proceeds with a general history of the railway system from the opening of the Stockton and Darlington line in 1825; urges the desirability, indeed, the absolute necessity, in the present state of affairs, of a uniform system of accounts being kept by *all* companies; takes a view of the causes and the character of the times which led to the great European political earthquake of last year, shattering Governments, extinguishing thrones, exiling monarchs, banishing ministers, paralysing commerce, destroying the value of all property, and leaving Europe flooded with the turbulent tide of democracy; and arrives at the conclusion, that railways offer permanent and prospective security for capital in an eminent degree. The early struggles for existence, which every new-born system has to endure in this country, are passed; the wild burst of public feeling, which caused an over estimate of its value, is passed. The new system of free trade appears likely to make this island one vast depôt for merchandise of every description, imported without restraint from every nation. Merchandise, to be profitable, must be conveyed to the best markets by the most rapid conveyance, and the profits from railway investments must be progressive unless commerce stagnates, population ceases to increase, or the travelling world stands still. The names of the chairman and secretary are given at the commencement of each railway history, and the following pithy note appears as a postscript:—"Since this work has passed through the press, GEORGE HUDSON, Esq., M.P., has resigned the chairs of the Midland, the York and North Midland, and the York, Newcastle, and Berwick Railways; and DAVID WADDINGTON, Esq., M.P., that of the Eastern Counties Company. Their successors were not appointed at the time this work was published."

* *The Railways of the United Kingdom Statistically Considered; together with the Railway Accounts, rendered upon a Uniform Plan.* By HARRY SCRIVENOR, secretary to the Liverpool Stock Exchange. London: Smith, Elder, and Co., Cornhill.

A Glossary of Terms used in the Coal Trade of Northumberland and Durham. Newcastle-upon-Tyne: Wm. John Bell, Union-street. London: J. G. Bell, Hornton-street, Kensington.

This is a well printed pamphlet, of above 50 pages, of the local technical terms employed among the coal miners of Northumberland, many of which are explained at considerable length, with statistical returns—thus, under the term "barrow-man," we find the average day's work of a young man "putting" alone, who may be from 17 to 21 years of age, equal to 556,416 lbs. raised 1 ft. in 12 hours, which is about equal to the average force of a man as estimated by Tredgold. The process of "boring" is pithily described, with the names of the several parts of the apparatus employed, with the words repeated in their alphabetical position referring to the full explanation. The usual wages of the several workmen are given; mode of working, raising, cleaning, and shipping coal; the customs of leasing, analyses of the several descriptions of coals, and the various gases of the mine. In fact, in addition to a mere glossary of mining terms, it forms a sort of miniature treatise on coal mining, of much use to the rising generation of miners, and for young men entering the profession of colliery viewing, to whom the pamphlet is dedicated. In his preface the author expresses his surprise that no really practically useful elementary work, explaining familiarly the technicalities of the coal trade, has yet appeared, and to remedy the deficiency was at a former period his intention; he found the subject, however, so voluminous, that with the hope that somebody more capable of the task should undertake it, he has published this glossary first, as a stepping-stone to something more important.

A Treatise on the Law of Delapidations and Nuisances. By DAVID GIBBONS, Esq., of the Middle Temple. London: John Weale, High Holborn.

The above treatise, the second edition of which has just issued from the press, is a voluminous work, extending over upwards of 400 pages, and, like the generality of law writings, sufficiently dry and uninteresting to the general reader. To the profession, however, we have no doubt it will prove a valuable work, concentrating the whole laws upon the subject, particularly those branches of law in which architects and surveyors are interested, and which they have occasion to refer to in the practice of their professions. In his preface, the author informs us that his design has been to state the different rules of law inducible from cases, and to abridge the cases illustrating and establishing the rules in chronological order. By this means the reader can judge for himself, whether the law is fairly stated, and will better understand it by seeing the reasons on which it is founded, and the cases in which it has been applied. It appears, however, that only a portion of the work has been carried out strictly according to this plan, for want of sufficient leisure. In a strictly legal work like the present, consisting principally of cases and opinions, there is no room for comment on the style; suffice it to say, that the work throughout is evidence of the greatest industry and general experience on the part of the learned author, who, in a copious and lucid introduction, explains the distinction between delapidations and nuisances, defines their character, as also that of wastes; the obligations to repair, the nature of such obligations; public repairs of highways, churches, bridges, sewers, &c. All these and many other points are most extensively treated in the body of the work, forming a complete volume for reference of the first order to the legal profession, as well as the architect and surveyor. The volume is got up in Mr. Weale's best style, and we have no doubt will be duly appreciated.

BANK OF BRITISH NORTH AMERICA,

INCORPORATED BY ROYAL CHARTER.

The court of directors hereby give Notice, that a HALF-YEARLY DIVIDEND, at the rate of 5 per cent. per annum on the capital of the bank, will be PAYABLE to the proprietors of shares registered in this country, on and after the 5th day of July next, at the office of the corporation, 7, St. Helen's-place, Bishopsgate-street, between the hours of Ten and Four.—No transfer can be made between the 15th inst. and the 5th proximo, as the books must be closed during that period. By order of the court,

7, St. Helen's-place, London, June 6, 1849. G. DE B. ATTWOOD, Secretary. 36

RIDER'S RAILWAY BRIDGE.

—This BRIDGE, BUILT wholly of IRON, will be ERECTED by the PATENTEE on the following terms:—

A BRIDGE, of 150 span, for a double track railway, broad gauge—Price £2000.
A BRIDGE, of 100 feet span, same dimensions—Price £1000.
These prices are exclusive of abutments or piers.
ROADWAY BRIDGES at a reduction on cost of from one-half to two-thirds.

Apply to Mr. S. MOULTON, Patentee, Bradford, Wilts, or to Mr. Howard Jacobson, Suffolk-lane, Thames-street, London. 37

PREVENTION BETTER THAN A CURE.—RAILWAY

COMPANIES, OWNERS and PROPRIETORS OF STEAM MACHINERY in general are respectfully informed, that the ONLY INFALLIBLE METHOD OF

PREVENTING BOILER INCRUSTATIONS

is that lately PATENTED by Mr. HORSLEY, which, while it effects a considerable saving of time, fuel, wear and tear of machinery, tends greatly to DIMINISH, if not altogether to PREVENT, the POSSIBILITY OF EXPLOSIONS.—No destructive ammoniacal or other salt is introduced into the boiler. 38

As this Patent embraces a field of so extensive a character, applying equally to Water Companies and Manufacturers, it is the intention of the proprietors to FORM a COMPANY, so soon as a sufficient number of individuals can be got together.

For further particulars and prospectuses, apply to Mr. Horsley, Ryde, Isle of Wight; of Mr. Campin, Patent Office, 210, Strand; or the office of the *Mining Journal*, No. 26 Fleet-street, London.

STRUVE'S PATENT MINE VENTILATOR.

TO COLLIERY PROPRIETORS.

Quantity of air passed through a Mine almost unlimited, to the extent of 200,000 cubic feet per minute, if necessary—depending on size of apparatus.
No injury to pumps, tubbing, chains, ropes, or pitwork.
Goaves kept clear. 39
Not influenced by barometrical and thermometrical changes in the atmosphere, or by wind.
Current of air undeviating.
LICENSES will be GRANTED on application to

Mr. WILLIAM PRICE STRUVE, C.E., Swansea.

The ventilator has been erected at the Eaglesbush Colliery, near Neath, and is perfectly efficient, and may be viewed on application to the proprietors, Messrs. Penrose and Evans, Neath.

IMPROVEMENTS IN MACHINERY FOR THE MANUFACTURE OF WIRE ROPE or CORDAGE, and IMPROVED MODES of FITTING and USING the SAME.

ANDREW SMITH'S PATENT WIRE ROPE. 40

The Undersigned respectfully inform the public that they have become SOLE LICENSEES of Mr. ANDREW SMITH, for the MANUFACTURE and SALE of his PATENT WIRE ROPE, and that they have REMOVED from the premises (late Mr. Smith's) at Millwall to HIGH-STREET, WAPPING, where orders will be executed with the utmost attention and dispatch.—Lightning Conductors, Signal Cord, and Sash Line, always in stock. WILKINS & WEATHERLY.

Patent Wire Rope Works, 39, High-street, Wapping, London, May, 1849.

NOTICE.—ANDREW SMITH'S PATENT FOR WIRE

ROPE.—A letter, signed "George Binkes," formerly in our employ, having been generally circulated, containing much gross misrepresentation, and calculated to mislead the public, the Undersigned beg to state, that having made definite ARRANGEMENTS with the PATENTEE for a LICENSE to MANUFACTURE, under the patent secured by him, bearing the date of May, 1849, they are fully enabled to EXECUTE any ORDERS with which they may be favoured. Having removed to more commodious premises, and availed themselves of improved machinery for the manufacture of the article, they have only to assure those who may favour them with their orders, that the same care and attention shall be bestowed which, they have reason to believe, has secured them such general support. WILKINS & WEATHERLY.

Patent Wire Rope Works, 39, High-street, Wapping. 41

THE STEAM-ENGINE.—W. BROTHERTON & CO. beg

to CALL the ATTENTION of ALL PARTIES EMPLOYING STEAM-POWER to their PATENT PURIFIED OIL for the ECONOMICAL WORKING of the STEAM-ENGINE and other MACHINERY.

The adoption of its use effects a saving of 25 per cent. on the quantity required for lubrication over any other oil; and its properties are such as to greatly preserve the bearings of machinery in general. A trial will prove the fact. 42

W. BROTHERTON & CO.,

PATENT OIL FACTORY, HUNGERFORD WHARF, CHARING-CROSS, LONDON

IMPORTANCE OF LIFE ASSURANCE.

This day, in One Volume, octavo, price 7s. 6d. in cloth,

LIFE ASSURANCE.—An Historical and Statistical Account

of the Population, the Law of Mortality, and the Different Systems of Life Assurance; including the Validity and Non-Validity of Life Policies: with OBSERVATIONS on FRIENDLY SOCIETIES and SAVINGS' BANKS; to which is added, a Review of Life Assurance, explanatory of the Nature, Advantages, and the various Purposes to which it may be applied. By ALFRED BURT, Esq. 43

London: Effingham Wilson, publisher, 11, Royal Exchange.

THE ÆGIS LIFE ASSURANCE COMPANY.

(Incorporated pursuant to Act of Parliament).

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John Greene, Esq., M.P. — S. M. Martindale, Esq.
J. Pelham Buckland, Esq., M.D. — W. Pritchard, Esq., High Bailiff of Southwark.
James T. Cookney, Esq.

HONORARY DIRECTORS.

The Chairman and Deputy-Chairman for the time being of the Union Fire and Life Assurance Society, Cornhill.

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OFFICES—No. 41, MOORGATE-STREET.

The transactions of this office extend to all business connected with, or in any way dependent on, the contingencies of human life; and the company affords to persons assuring the combined advantages of rates of premiums as low as can be safely taken—methods of assurance which oblige the assured to pay only for so much protection as he requires, and the most ample security, both by its own capital, and its arrangements with the "Union" Fire and Life Assurance Society, which is one of the oldest existing offices (having been established in 1714), and now possesses a large accumulated capital.

Policies granted on the lives of members of building societies, to secure the payment of such subscriptions as may become due after their death.

Assurances for the whole of life, at little more expense than temporary assurances can be effected in this office, by annually increasing premiums.

Participation in profits to the extent of four-fifths by those assured for the whole of life.

Persons temporarily afflicted, or whose proposals for assurance may have been declined by other offices, assured at premiums carefully adjusted to the increased risk.

Policies granted for sums of money payable upon the assured attaining any specified age, or their antecedent death, and for annuities, immediate, deferred, or contingent.

Loans (repayable by instalments, ceasing however at the decease of the borrower), upon any description of assignable property of adequate value, upon the policies of the company, or on approved personal security.

Policies for terms of years, or for the whole of life for any sum not exceeding £5000; and premiums payable in one sum, annually, half-yearly, quarterly, or monthly, so that the various plans of this company are available to all classes. Every facility consistent with the security of the company for the payment of premiums by policy holders at their convenience, and policies can at any time be surrendered for their full value; thus affording the greatest advantage for the deposit and investment of money.

A liberal commission allowed to solicitors, secretaries of building societies, and others introducing business. Agents wanted in all the principal towns, where none have yet been appointed.

Detailed prospectuses, with tables, as well as any further information, can be obtained on application to JOHN COOKE, Actuary and Resident Secretary.

41, Moorgate-street, Bank, London.

EUROPEAN LIFE INSURANCE AND ANNUITY COMPANY,

ESTABLISHED JANUARY, 1819.

Empowered by special Act of Parliament, 7 and 8 Vic., Cap. XLVIII.

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Every description of risk contingent upon life assured.

Four-fifths of the profits septennially appropriated as a bonus to holders of policies granted on the participating scale. The last division averaged from 10 to 37½ per cent. on premium received during the preceding seven years.

A table for insurers on the non-participating scale, at a reduced rate, has recently been computed.

Permission to proceed to, and reside in, the British colonies, or any country not lying within the 33d parallels of latitude upon payment for sea-risk only.

Age and state of health admitted.

Proposals may be passed daily.

Every information can be obtained on application to the secretary, at the office, No. 10, Chatham-place, Blackfriars, London. GEORGE W. S. IAGO.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY 46 BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 20th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

CWMBRAIN PATENT IRON REFINERY.—The

PROPRIETORS of IRON FORGES and MILLS are respectfully INVITED to MAKE TRIAL of Mr. BLEWITT'S REFINED IRON, or METAL, PREPARED by a

NEW PATENT PROCESS,

whereby the IRON is completely FREED from the IMPURITIES CONTRACTED in the BLAST-FURNACE, and, by judicious mixtures, rendered applicable to every kind of manufacture. Heretofore, the metal usually sold in the market has been produced from the worst pigs, scraps, and refuse of some particular blast-furnace, or set of furnaces, without any mixture, or any regard to quality, or the purpose for which it might be required. The PATENT METAL is PREPARED ON SYSTEM, and TO ORDER, for any of the following purposes:— 47

1. For BOILER and TANK-PLATES.
2. For TIN-PLATES, commonly called COKE-PLATES.
3. For STRONG CABLE BOLTS, RIVET, and ANGLE IRON.
4. This COMPOUND PUDDLED, beat under the hammer into a bloom, reheated, and rolled into a 6 or 6½-inch bar, makes TOPS and BOTTOMS for FLANCH and OTHER RAILS, of very superior quality, and attended with less waste than any other kind of iron used for that purpose. It is also well adapted for nail-rods, horse-shoes, and for other ordinary uses of the blacksmith.

The PATENT METAL is marked with a squirrel, and the initials "R. J. B.," and is to be had only at the "Cwmbrain Iron-Works," near Newport, Monmouthshire

PATENT TOUGHENED CAST-IRON.—Messrs. GARDEN

and MACANDREW beg to call the attention of Architects, Builders, Engineers, Ironfounders, &c., to the ABOVE DESCRIPTION OF IRON (Mr. Morries Stirling's Patent), which, after numerous trials, experimental and practical, is found greatly to exceed all other cast-iron in tensile and transverse strength, as well as in resistance to crushing forces. Several of the most extensive ironmasters have been licensed, and from them, or their brokers, the patent iron can be procured.

Messrs. GARDEN & MACANDREW have always a STOCK of this IRON in PIGS, and are ready to EXECUTE ORDERS to ANY EXTENT, on the shortest notice. 48

27, Queen-street, Cheapside, April 25, 1849.

INDURATED AND IMPERVIOUS STONE, CHALK, &c.

—AGENTS, with capital, are WANTED in all TOWNS to SUPPLY (under British and Foreign Patents) the great demand for HUTCHISONISED MATERIALS—hard as granite, impervious to moisture, vermin, &c.; the cheapest and most durable for all buildings, hydraulic, paving, monumental and decorative work.—The profits are large. Apply to HUTCHISON & CO., 49

East Temple Chambers, London, or Tunbridge Wells, Kent, stating name, address, and capital at command.

N.B.—Houses cured of damp. The produce of soft stone quarries, chalk, plaster of Paris, wood, pasteboard, and all absorbent materials indurated to resist frost, vermin, &c.

LICENCES GRANTED.

EMERSON'S PATENT LIQUID CEMENT is ready for use,

is simple in its application, and only ONE-EIGHTH the COST of OIL PAINT; for beauty it is pre-eminent over all other materials used on the fronts of houses—giving the exact appearance of FINE CUT STONE; can be used at once on fresh Roman cement or other plastering; is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be beautified in any weather, at a trifling cost. Sold in casks, of 1, 2, and 3 cwts., at 8s., 15s., and 21s. each. 50

PATENT MINERAL PAINT.

Invaluable as a COATING for SHIPS' SIDES and BOTTOMS, all kinds of WOOD or METAL WORK, roofing felts, leaky roofs, spouts and gutters, doors, sheds, railing, and all kinds of out-door work, and being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay—requires no preparation, and will dry in a few hours.—Sold in casks, 2 to 50 gallons. Brilliant black, 2s.; rich brown, 2s. 9d. per gall.

BELL, LEAR, & CO., 16, Basing-lane, Cheapside.

NOTICE.—WENHAM LAKE ICE SUPERSEDED!

(BY ROYAL LETTERS PATENT.)

MASTERS AND CO.'S PATENT SHERRY COBBLER

FREEZING AND COOLING JUG.

By this Patent Jug, spring water is congealed into the purest ice, on the table or sideboard, for Sherry Cobblers, &c., in FIVE MINUTES, at the cost of Twopence. The public is respectfully invited to see the process of this extraordinary and useful invention, as actually BOILING WATER CAN BE CONVERTED INTO ICE without the aid of ice!

Patentees of the Freezing Machines (by which 20 to 100 quarts of Desert Ice can be made in a few minutes, and Rock Ice at the same time, and Wine cooled), Cooling Decanters, Refrigerators, Butter Coolers, and Percolators. By this last-mentioned article a bottle of wine, &c., can be cooled in a minute without ice, for one halfpenny.

MASTERS & CO.'S IMPROVED APPARATUS FOR MAKING PURE SODA WATER, LEMONADE, NECTAR, and all ÆRATED WATERS.—This apparatus needs only to be seen to be appreciated. Price 30s.—MASTERS & CO., PATENTEES,

294, REGENT-STREET, AND 7, MANSION-HOUSE-STREET, CITY.—Also, 51

BY ROYAL LETTERS PATENT,

MASTERS & CO.'S PATENT ROTARY BUFF KNIFE CLEANERS, which will clean and polish, equal to new, twelve knives in one minute, without noise or dust.

The various processes shown at Masters and Co.'s Show Rooms, 294, Regent-street, and 7, Mansion-house-street, City, and may also be seen at the Royal Botanic, Zoological, and Colosseum, Regent's-park, and the Polytechnic Institution, Regent-street.

294, REGENT-STREET, AND 7, MANSION-HOUSE-STREET, CITY.

IMPORTANT TO MINE OWNERS, &c.

GUTTA PERCHA COMPANY—PATENTEES,

CITY-ROAD, LONDON.

The GUTTA PERCHA COMPANY beg to bring under the notice of Mine Owners, Manufacturers, &c., the GREAT SAVING, both of time and expense, which is effected by the use of the GUTTA PERCHA PUMP BUCKETS and VALVES. These Buckets may be had of any size or thickness, *without any seam or raised joint*. They are unaffected by acids, alkalies, &c. Cold water will never soften them, and they are, consequently, much more durable than leather, and also cheaper. The most gratifying testimonials have been received from millowners, who have had these Buckets in operation for several months past, without the slightest repairs being required. 52

GUTTA PERCHA TUBING

Being so remarkable a CONDUCTOR of SOUND, is now being extensively applied for CONVEYING MESSAGES from ONE BUILDING, or PLACE, to ANOTHER. If a Tubing of this material, 1 inch diameter, be carried from the mouth of a mine, or pit, down the shaft, to various parts of the mine (no matter whether a quarter or half a mile distant), an instant communication may be established by means of the whistle, on Whishaw's principle, and a conversation carried on as distinctly as though the parties were but a few feet from each other. When these Tubes are in general use, they will greatly lessen the *loss of life in mines*.

GUTTA PERCHA DRIVING BANDS

Continue to secure a continually increasing demand; they can be had of any size or length. Their durability and strength, permanent contractility and uniformity of substance, their non-susceptibility of injury from contact with oils, grease, acids, alkalies, or water, and the facility with which the only joint required can be made in bands of from 200 to 300 feet long, render them superior for almost all working purposes, and decidedly economical.

GUTTA PERCHA Soles for Boots and Shoes, Bowls, Buckets, Picture Frames, Brackets, Mouldings, Surgical Instruments, Vases, Cups, Inkstands, Balls, &c., may be had at the Company's Works, Wharf-road, City-road, London, or of any of their wholesale dealers in town or country.

DAMP AND GASEOUS EXHALATIONS.

SANATARY MEASURES.

All MEMBERS of BOARDS OF HEALTH are especially DIRECTED to the most EFFECTIVE MEANS which they can ADOPT to PREVENT the injurious and often FATAL EFFECTS upon the HEALTH of the COMMUNITY, arising from exhalations that are produced from moisture, decayed animal matter (as in grave-yards), stagnant water, and collections of foetid refuse, tending to produce a miasmatic state of atmosphere. In situations so effected, the impervious quality of the ASPHALTE of SEYSSEL renders it the most perfect PAVEMENT or COVERING that can be relied upon for hermetically closing, and thereby preventing the rising of moisture and escape of noxious vapours. The present extensive application of this material for covering roofs, terraces, and arches, for preventing the percolation of wet, is strong evidence of its effectiveness for the above purposes, which is further confirmed by the following extract from the Report of the Commissioners on the Fine Arts:— 53

"In 1839, I superintended the construction of a house of three stories on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and internal walls was covered at the level of the internal ground floor with a layer of SEYSSEL ASPHALTE,* less than half an inch thick, over which coarse sand was spread.

Since the above date, no trace of damp has shown itself round the walls of the lower story, which are for the most part painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ in. above the external surface of the soil, and only 19½ in., at the utmost, above that of the sheet of water.

The layer of Asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots indicating the presence of damp have been since remarked at the base of the door-posts."

* This method has been adopted at the new Houses of Parliament.

Seyssel Asphalte Company, Stangate, London. I. FARRELL, Secretary.

FOR EVERY HOUSE IN THE KINGDOM.

HARPER TWELVETREES' GENUINE CONCEN-

TRATED WASHING PREPARATION, for accomplishing a week's wash in 1½ hour, and is warranted not to injure the finest fabric.—Sold by all chemists and oilmen, in bottles, at 6d., 1s., and 1s. 6d. The 1s. 6d. bottles contain sufficient for 48 gallons of water, which will boil three lots of clothes, being equal to 144 gallons. 54

All the leading journals in the kingdom have spoken favourably of this invaluable process, now adopted in most of the infirmaries, asylums, public institutions, and families throughout the kingdom.

MANUFACTURED only by TWELVETREES, BROTHERS, Ink and Blacking Manufacturers, Millman-street, Bedford-row, London, wholesale and for exportation.

Two thousand more agents wanted.

Sold wholesale by Barclay and Sons, Sutton, Edwards, Hanney, &c.

No Chemical or Potash preparations are introduced, which are notoriously injurious to linen.—MANUFACTORY—MILLMAN-STREET, BEDFORD-ROW, LONDON.

PATENT RAILWAY AND OTHER CARRIAGE AXLES,

MANUFACTURED BY THE

PATENT SHAFT AND AXLE-TREE COMPANY,

BRUNSWICK IRON-WORKS, WEDNESBURY, STAFFORDSHIRE.

The Judicial Committee of the Privy Council having declared that the AXLES 55 MADE BY THE PATENT SHAFT AND AXLE-TREE COMPANY

had proved a PUBLIC BENEFIT in greatly conducing to the SAFETY of RAILWAY TRAVELLING, the exclusive right to manufacture has been extended for four years, on condition that the practice of charging a moderate price, proved hitherto to have been pursued, should be made imperative.

It was also proved that these Axles were in general use—upwards of 100,000 having been supplied to the English and Continental Railways, among whom are the London and North-Western, the Midland, and the Great Western; that they had withstood frequently severe tests applied by the engineers of these railways for the purpose of experiment, and others still more severe to which they were accidentally subjected in use. In one such instance a Patent Axle, 4¼ inches in diameter, sustained the whole force of a heavy train going at the rate of 60 miles an hour, by which it was twisted and bent nearly double, without showing the least fracture.

The patent principle of manufacture causes the axles to be equally strong in all directions, for the "faggot" is made in a cylindrical form, by the external bars being rolled of such a section as to fit accurately around a centre bar. This faggot, however large, is perfectly welded throughout its whole length at one heat, avoiding the necessity of the frequent heating and hammering of the ordinary mode, by which much risk is run of imperfectly welding, burning, and otherwise injuring the iron.

The use of this principle, combined with experience gained of the quality and admixture of the iron and mode of treatment best adapted to resist the strain to which an axle is subjected, enables the Patent Shaft Company uniformly to supply safe axles.

In all cases where the use of the Patent Shaft Company's Axles are specified for, it is respectfully recommended that information be sent to the works; for, although every Patent Axle is stamped with the company's name, worthless axles, made at an expense little beyond that of common bar-iron, have, in many instances, been substituted.

It was given in evidence before the Privy Council, by Robert Stephenson, Esq., M.P., that having, in consequence of an accident, tested a number of such common axles, he found 48 out of 50 broke so easily as to be perfectly unfit for use; that he ordered them all to be removed, and that he has since recommended the Patent Axles to be used exclusively.

The trial of the Patent Shaft Company's Iron is solicited in cases where the power to resist a great strain is of importance. Evidence can be afforded from several railway engineers, of great economy having resulted from its use, in preventing the breakage to which their coupling chains were frequently previously subjected, particularly on the Midland Railway, where the heavy mineral traffic subjects these chains to unusual strains.

Iron manufactured on the patent principle is also recommended for coach and carriage axles, for, if not afterwards injured by the coachsmith, all risk of breakage will be avoided.

56

WRIGHTON'S PATENT ELASTIC SCREW COUPLING.

The PROPRIETORS of this simple and useful INVENTION invite the attention of Railway Companies to the ADVANTAGES and ECONOMY to be derived from its general adoption. The severe tests to which it has been subjected on the Eastern Union Railway fully demonstrate that its application to trucks or goods waggons, with *dead draw hooks and solid buffers*, produces as perfect and beneficial a result *as a complete set of spring traction and buffing apparatus*, and at about one-fourth the cost of the cheapest that can be supplied. Its application to passenger carriages will be found equally beneficial in giving additional ease and elasticity to a train, and preventing the injurious shocks at starting and stopping so much complained of. For further particulars apply to Mr. Parsons, Albert-place, Lewisham; or at the Patent Office, 166, Fleet-street.

IMPROVED LIFTING JACKS,

MANUFACTURED BY

W. AND J. GALLOWAY,

PATENT RIVET WORKS,

MANCHESTER.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

57

**** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

EXPLOSION AT WHITECHAPEL.

HENRY BAKER begs to call the attention of Engineers and

Proprietors of Steam-Engines, to his newly-improved STEAM GUAGE, which shows the pressure and temperature of the Steam, as seen in the drawing annexed. It is an ornament to the engine-room, and supersedes the ordinary Mercurial Guage in these respects, by not being so cumbersome, much cheaper, and warranted accurate.

It has been tested at the Polytechnic Institution, London, with satisfactory results; and since the boiler explosion of the *Cricket* steam-boat this Guage has been adopted on board the steam-boats plying on the River Thames.

Boiler explosions, in many instances, occur through Steam Guages not being in good working order; therefore, every attention should be paid to these very necessary adjuncts.

HENRY BAKER'S STEAM GUAGES

may be fixed in a counting-house, and will show the pressure the same as if fixed in an engine room—thereby having a check on the person working the engine.

Price.....£2 2s.

VACUUM GUAGES,

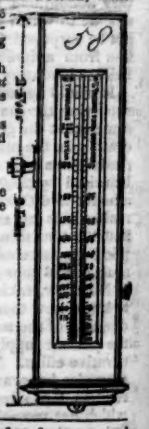
in brass frames, showing the barometric scale from 22 in. to 30 in.

Price.....£3 3s.

VACUUM GUAGES,

in mahogany, very elegant, showing the barometric scale in full.

Price.....£3 3s.



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HENRY BAKER,

BAROMETER, THERMOMETER, AND PHILOSOPHICAL INSTRUMENT MANUFACTURER,

No. 90, HATTON-GARDEN, LONDON.

KEATING'S COUGH LOZENGES.—Upwards of 40 years'

experience has fully confirmed the superior reputation of these Lozenges, in the cure of Asthma, Winter Cough, Hoarseness, Shortness of Breath, and other Pulmonary Maladies. They have deservedly obtained the high patronage of their Majesties the King of Prussia, and the King of Hanover; very many also of the Nobility and Clergy, and of the public generally, use them, under the recommendation of some of the most eminent of the faculty. They have immediate influence over the following cases:—Asthmatic and Consumptive Complaints, Coughs, Shortness of Breath, Hoarseness, &c. 59

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by Thomas Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; retail by all druggists and patent medicine vendors in the kingdom.

Church-street, Folkestone, Nov. 22, 1848.

SIR,—Having been troubled with a very bad cough for the last eight months, I applied to Mr. Hammon, chemist of this town, for some relief; he recommended me your "Cough Lozenges," which, I am happy to say, cured me in a week. I beg most cordially to recommend them, and beg you will not hesitate to make this letter public; such a valuable remedy cannot be too highly recommended. I have the honour to be, Sir, &c.

To Mr. KEATING. JOHN HILL, Bart.

THE SCIENCE OF WASHING.—"A New Mode of Wash-

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